JULY 4, 1942

Railway Age

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PRODUCTION DEDICATED TO LIBERTY

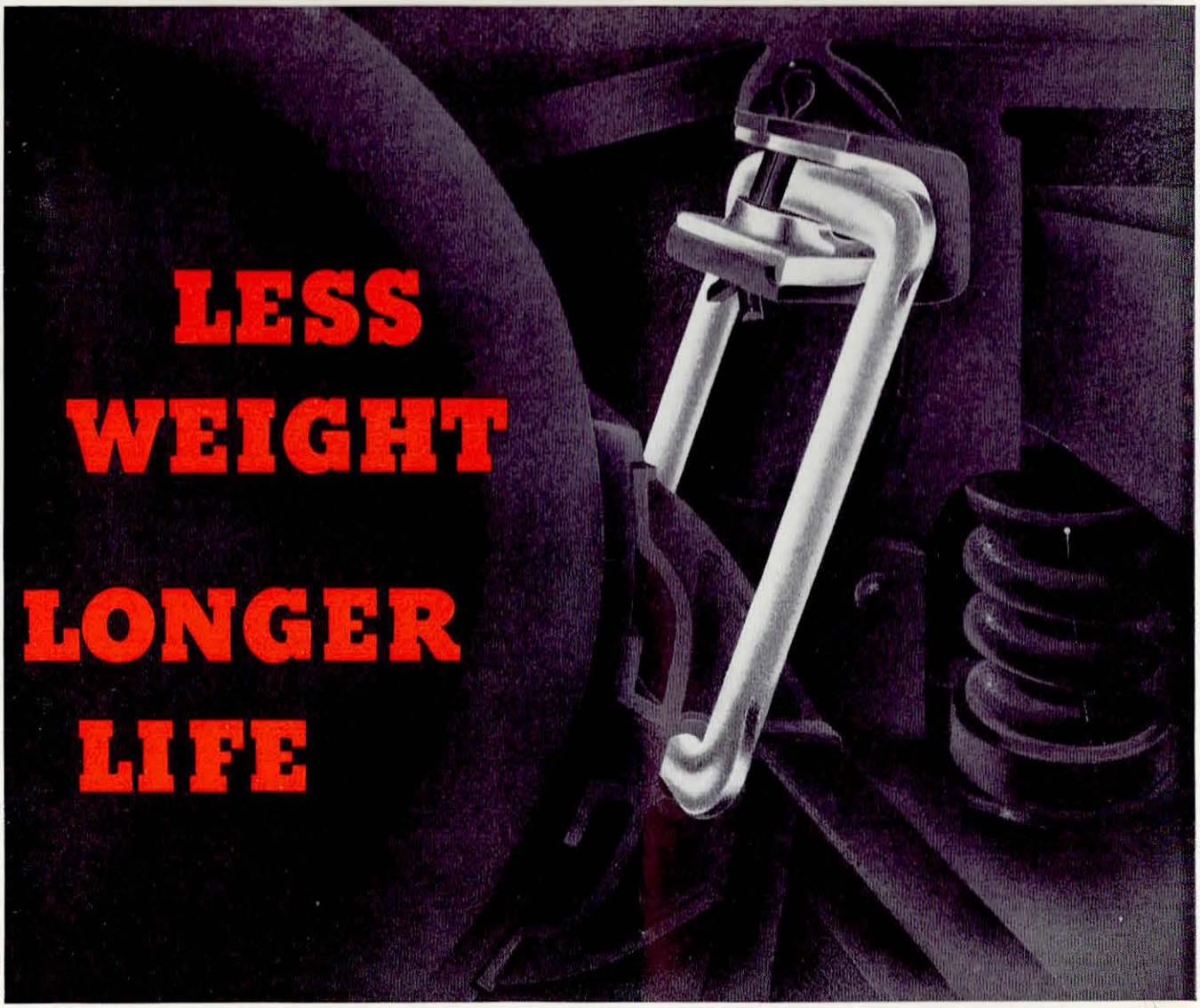
July 4, 1776 marked the birth of the Independence and Liberty which our nation is now enjoying. During these past 166 years, our "life, liberty and pursuit of happiness" has been repeatedly threatened, just as it is today, but our Democracy still lives . . . and we intend to keep it so. ★ ★ Throughout the world, on land, on sea, and in the air, America's armed forces are being supported by countless war materials produced in more than ninety General Motors plants. And on the *transportation front,* GM Diesel Freight Locomotives are providing reductions in train miles as much as 50 percent — increased hauling capacity — faster schedules . . . and for each Diesel operated, as many as five heavy steam locomotives can be released for other important services.

SERVING THE RAILROADS — SERVES AMERICA

GENERAL MOTORS LOCOMOTIVES

ELECTRO-MOTIVE DIVISION

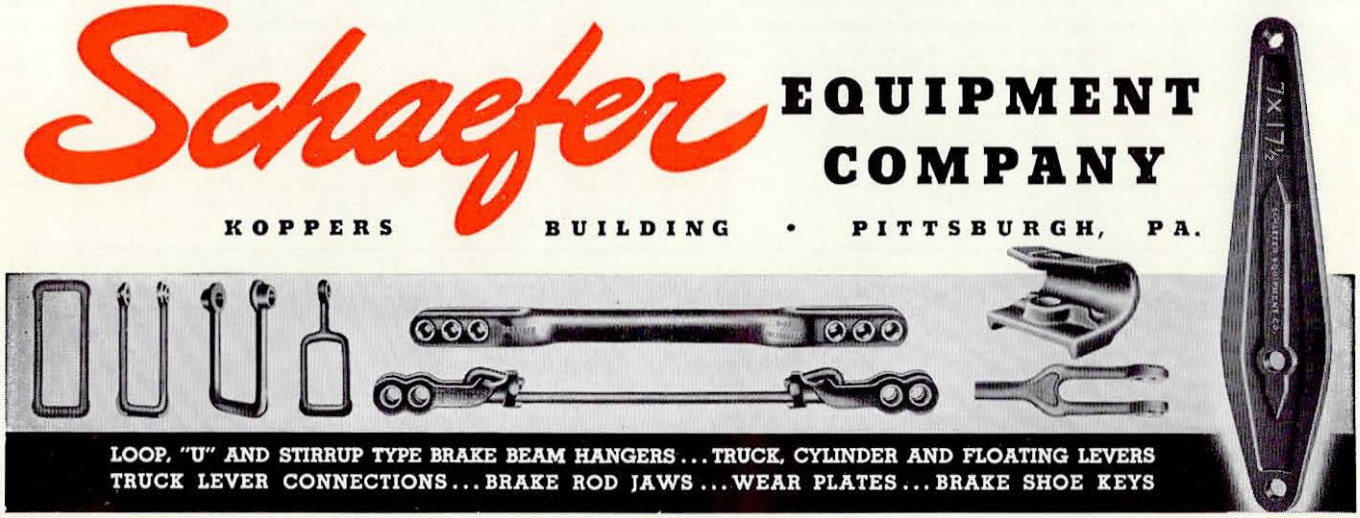
GENERAL MOTORS CORPORATION — LA GRANGE, ILLINOIS, U. S. A.



Schaefer Forged Steel Foundation Brake Gear Parts permit you to haul the same pay load with less power

Schaefer EQUIPMENT COMPANY

KOPPERS BUILDING • PITTSBURGH, PA.



LOOP, "U" AND STIRRUP TYPE BRAKE BEAM HANGERS ... TRUCK, CYLINDER AND FLOATING LEVERS
TRUCK LEVER CONNECTIONS ... BRAKE ROD JAWS ... WEAR PLATES ... BRAKE SHOE KEYS

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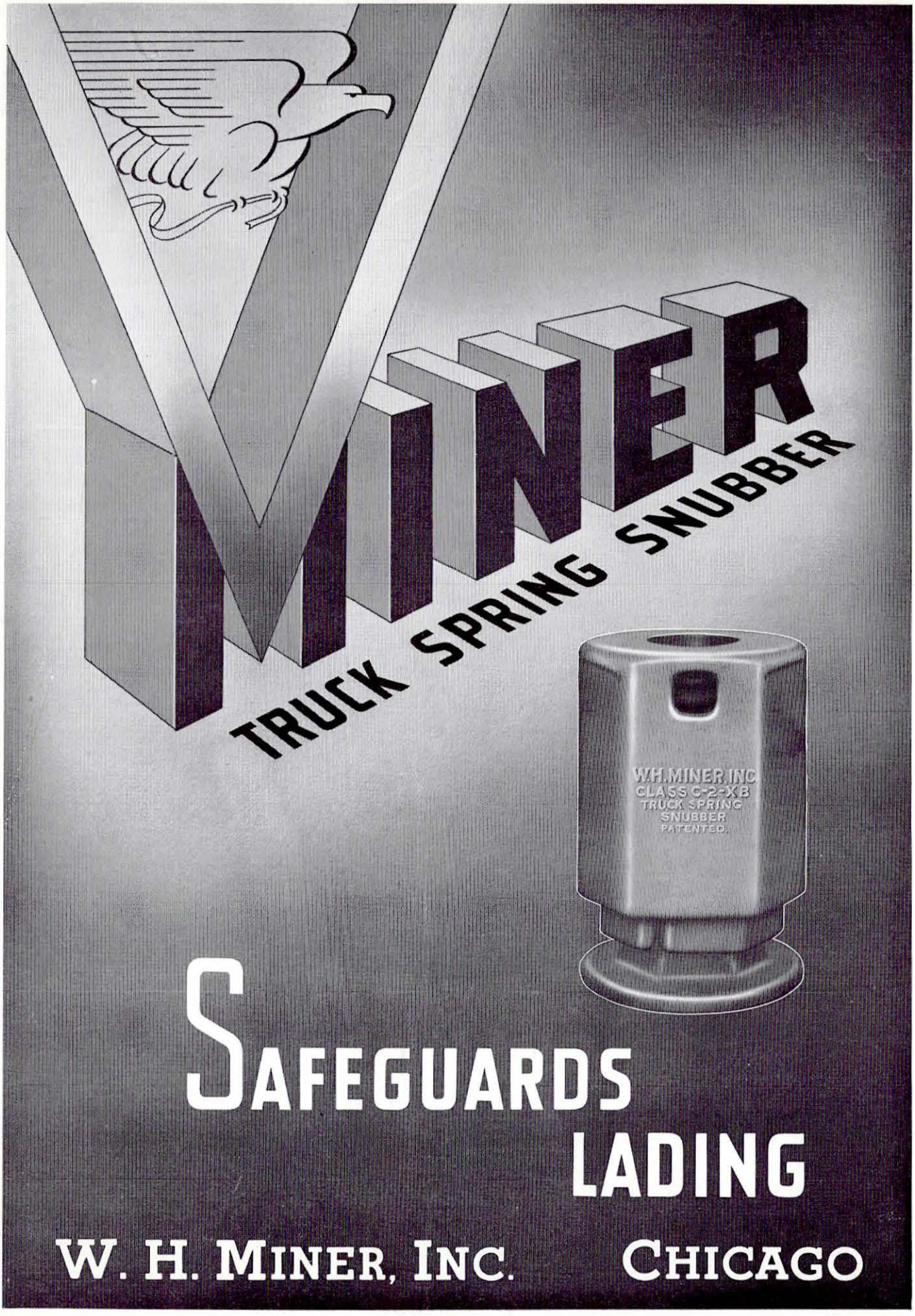
MINER
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LADING
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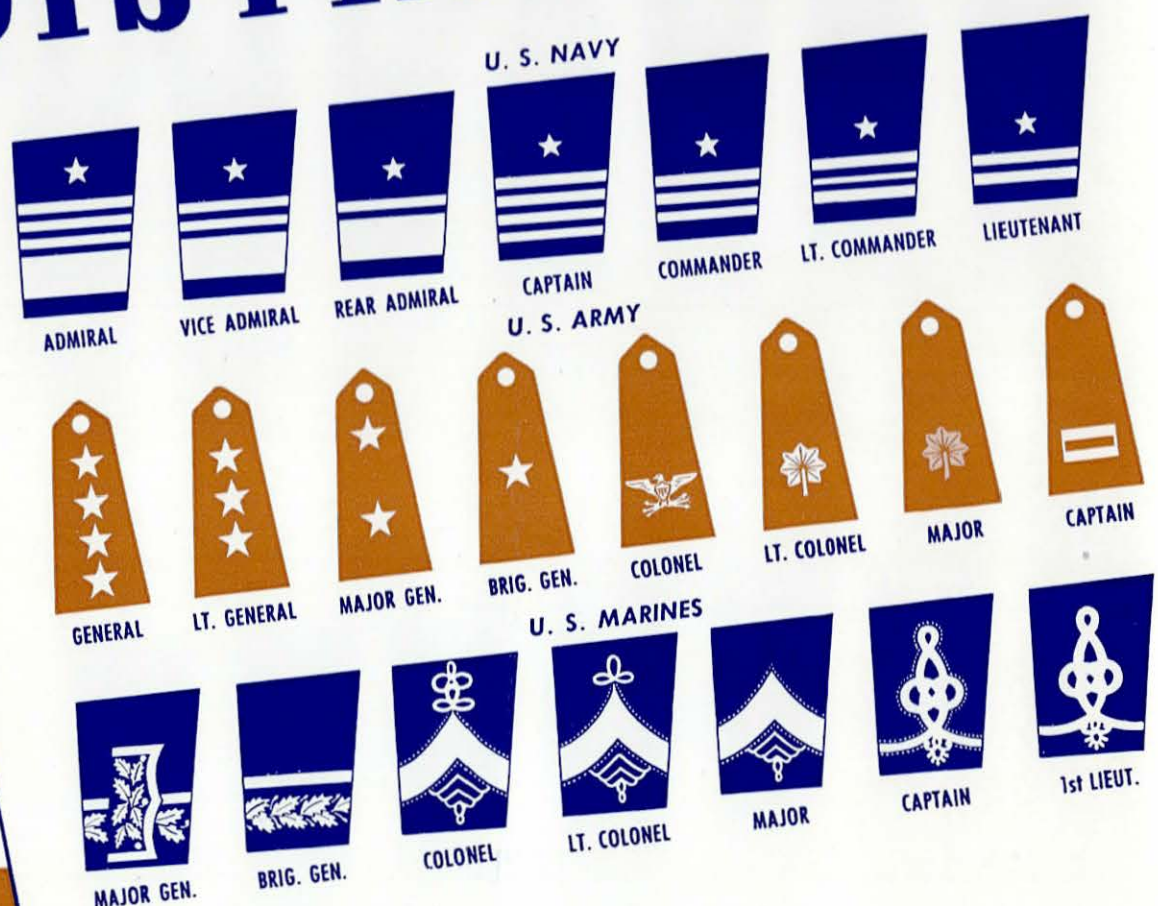
Insignia of DISTINCTION...



The Song of the A.C.F.

Volume for Victory!
Volume for Victory!
Ours is the task till the battle is won;
Untiring, unceasing, and ever increasing
The life-stream of Liberty, feeding the gun.

Volume for Victory!
Volume for Victory!
Beats from the forges that fashion the steel
Volume for Victory! Volume for Victory!
Rings in the rhythm of pinion and wheel.

Volume for Victory!
Volume for Victory!
You heroes of Wake and lone Corregidor;
And we're thinking too of the banner that you
Defended so bravely — now waving no more.

Volume for Victory!
Volume for Victory!
The blood that is staining the soil of Bataan;
And "Crimsons the wave", o'er the gallant and brave;
Teaches of Duty — calls to each man.

Volume for Victory!
Volume for Victory!
Theirs was the sacrifice, ours the gain;
By night and by day we'll work and we'll pray —
Till the Star Spangled Banner waves o'er them again.

— J. STEVEN *(employee at one of the A.C.F. plants making munitions)*

a.c.f.

Insignia of SERVICE to RAILROADS

● From buck private to general . . . from gob to admiral — one glance is enough to establish the fighting man's rank.

And the railroads have their famed insignia, too. Symbols known by millions from coast to coast. Badges that today are seen speeding everywhere on cars engaged in the most tremendous mass movement of vital goods the world has ever known.

On many of these cars there will also be found the insignia of a.c.f. — to serve not only as an identification of their source, but also as the symbol of our pledge of production, for nearly a century, that *whatever* a.c.f. *builds, it will build well.*

a.c.f. COVERED HOPPER C

a.c.f. GONDOLA CAR

a.c.f. BOX CAR

a.c.f. GONDOLA CAR

a.c.f. HOPPER CAR

a.c.f. BALLAST CAR

a.c.f. AMERICAN CAR AND FOUNDRY COMPANY

NEW YORK · CHICAGO · PHILADELPHIA · PITTSBURGH
ST. LOUIS · CLEVELAND · ST. PAUL · SAN FRANCISCO

The Future is NOW

General Machinery Corporation is turning out an increasing flood of War Production. The Management realizes that free institutions cannot endure without an Allied Victory. They realize that Victory, too long delayed, may be little better than defeat. That what it takes to win must be done now. They realize that there is not one pound of material, one ounce of energy, one split second of time to be wasted. They know that the hourglass of Peace has given way to the stop watch of War. They know that the Future is Now.

GENERAL MACHINERY CORPORATION

HAMILTON, OHIO

THE NILES TOOL WORKS CO.

THE HOOVEN, OWENS, RENTSCHLER CO.

GENERAL MACHINERY ORDNANCE CORPORATION

EVERY 15 HOURS FOR *111 YEARS...*

Baldwin, throughout 111 years of service to the railroads, has built more than 64,000 locomotives—an average of one locomotive every 15 hours for this entire period.

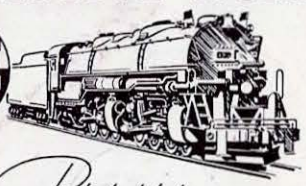
The experience gained through a century of association with railroad motive power problems is combined with engineering research and modern manufacturing facilities to produce the modern steam, diesel-electric and electric locomotives manufactured by Baldwin today.

From coast to coast, this modern Baldwin power is serving America by serving the railroads which are so vital to a nation at war. Baldwin-built power will continue to help with the job of transporting troops, implements of war and raw materials needed for victory.

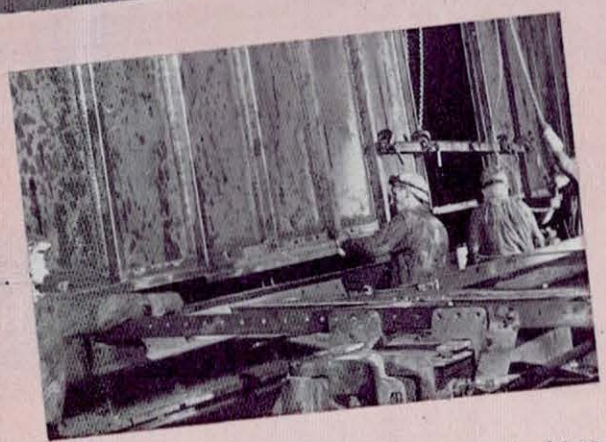
Today, Baldwin also is using its long and varied experience in the manufacture of Army tanks, guns, gun mounts, ship parts and other war materials.

THE BALDWIN LOCOMOTIVE WORKS

BLW THE BALDWIN GROUP



Philadelphia



At present, every pound of COR-TEN being produced goes directly into absolutely essential war equipment. But when that job is done, COR-TEN is going to be right back to save weight, to increase strength, to make your equipment last longer and to reduce your operating costs. In the meantime, our engineers will gladly show you how you can include COR-TEN construction most economically in your planning for tomorrow.

U·S·S High Tensile Steels

USS

UNITED

43,000 Reasons

why the railroads are doing the best job in history

43,000 Cor-Ten-built lightweight freight cars that carry bigger loads, that cost less to run, that are fit and ready for intensive operation, are helping to step up war-time freight service.

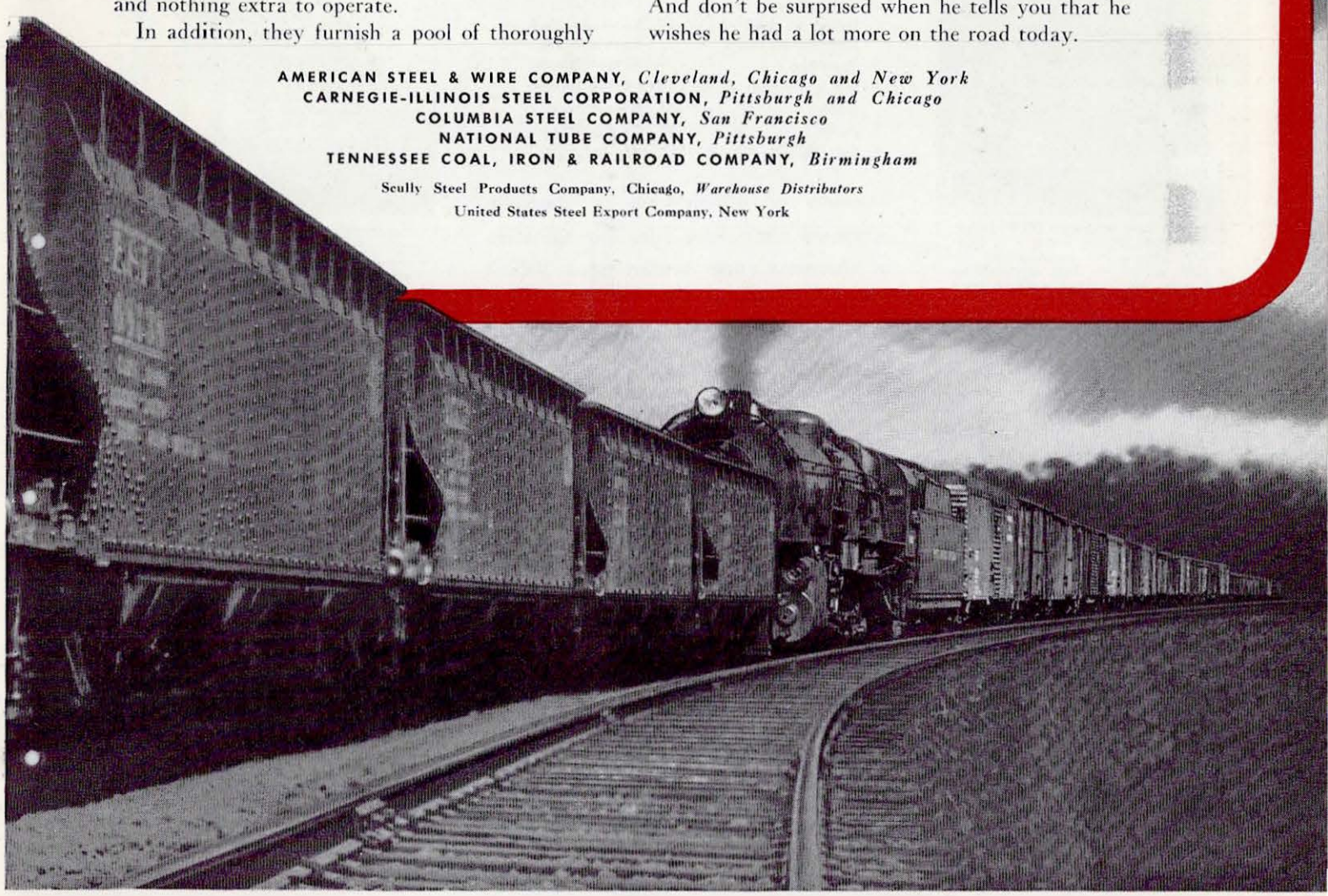
ABLE to carry from 2 to 5 tons more payload each, these Cor-Ten cars provide 110,146 tons additional carrying capacity. In effect they've added 2200 *extra* cars to our transportation system—cars that cost the railroads not a cent to build and nothing extra to operate.

In addition, they furnish a pool of thoroughly modern, highly efficient freight equipment upon which operators can depend to meet the speeded up freight schedules necessary today.

These 43,000 Cor-Ten *cars do more!* They cut down operating costs and reduce maintenance expense. By increasing capacity, they reduce car-miles, reduce train miles. By increasing stamina and corrosion resistance, they help reduce repairs to a minimum. These are facts. If you question them, ask any railroad man who has put Cor-Ten freight cars into service during the last six years. And don't be surprised when he tells you that he wishes he had a lot more on the road today.

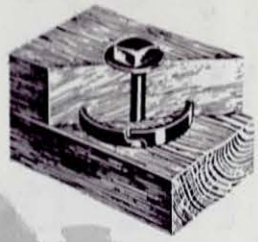
AMERICAN STEEL & WIRE COMPANY, *Cleveland, Chicago and New York*
CARNEGIE-ILLINOIS STEEL CORPORATION, *Pittsburgh and Chicago*
COLUMBIA STEEL COMPANY, *San Francisco*
NATIONAL TUBE COMPANY, *Pittsburgh*
TENNESSEE COAL, IRON & RAILROAD COMPANY, *Birmingham*

Scully Steel Products Company, Chicago, *Warehouse Distributors*
United States Steel Export Company, New York



U S STEEL

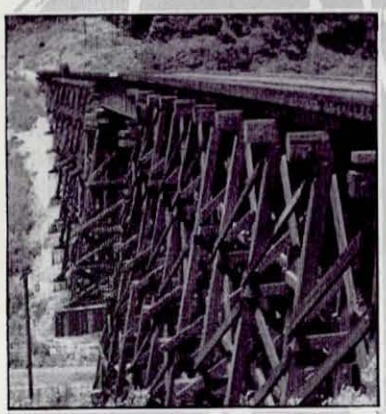
Making all TIMBER connections



The TECO Ring Connector spreads the load on a timber joint over practically the entire cross-section of the wood . . . brings the full structural strength of lumber into play.

Types of Railway structures using TECO TIMBER CONNECTORS:

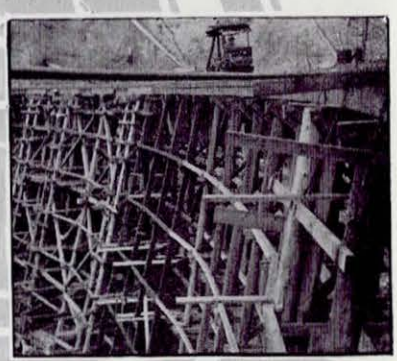
1. Roof Trusses
2. Overhead Cranes
3. Timber Bents
4. Connections between pile heads and caps.
5. Trestles.
6. Ballast deck stub piles.
7. Piers.
8. Pier Fenders
9. Sway Bracing
10. Coal Pockets
11. Auto Loading Dock
12. Between Rail Post and Tie Connections
13. Bridge Decks
14. Scaffolding
15. Coaling Towers
16. Warehouses



This structure employs TECO spike grids in all braced joints . . . The TECO system of construction is ideally suited to shop fabrication. All bents for this trestle were pre-framed and pre-treated.

Detroit Terminal loading dock, 600' x 50'. Thirty-five 50' trusses fabricated and assembled at job site and erected in units.

Chesapeake & Ohio Roundhouse, Clifton Forge, Virginia. Split rings were used for timber roof truss joint connections. Toothed rings were used for attachment of timber roof truss seats to timber columns.



Southern Pacific Trestle, Cochran, Ore. TECO toothed rings (3⅜") used in bracing connections on this structure.

Because of advantages in strength, economy, and long life, the railways of America use timber and TECO Connectors for practically every type of railway structure.

These advantages . . . of more joint strength with less wood and hardware . . . are obvious to those familiar with the TECO System of Timber Construction, which has been largely responsible for the many advances recently made in engineering timber to modern use as a construction material.

Full details, with case histories of jobs done, will be sent you on request.

Timber ENGINEERING COMPANY

WASHINGTON D. C. PORTLAND, ORE.

THIS distinctive trade mark on all COMMONWEALTH PRODUCTS guarantees their exceptional quality and dependability—thoroughly proven in service on thousands of locomotives and cars for more than a third of a century.

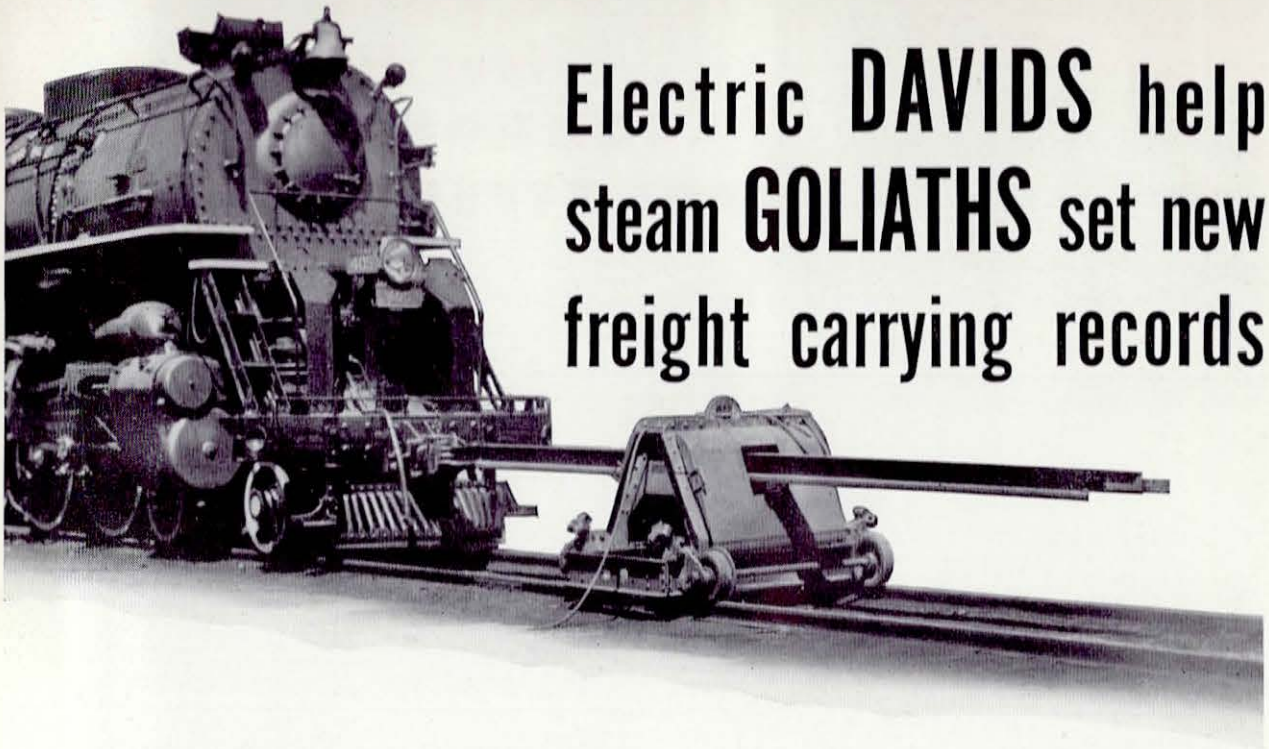
Today, with America at War, the dependability of COMMONWEALTH PRODUCTS is more vital than ever. Locomotives and Cars must stay in service longer, shopping delays must be cut to a minimum, more troops, passengers, and freight must be hauled on faster, continuous schedules.

Commonwealth One-Piece Cast Steel Products are doing their full part to enable the railroads to meet the unprecedented demands which transportation faces today. IN PEACE OR WAR—QUALITY COUNTS.

GENERAL STEEL CASTINGS

EDDYSTONE, PA.
GRANITE CITY, ILL.

MORE TIME ON THE ROAD . . . LESS TIME IN THE SHOPS!

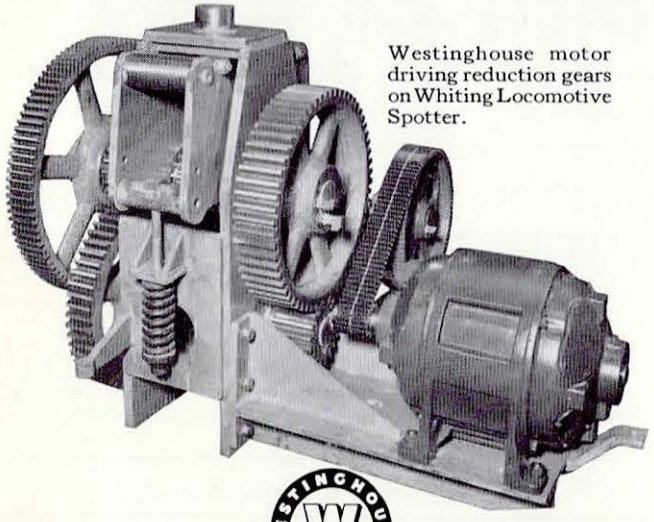


Electric DAVIDS help steam GOLIATHS set new freight carrying records

By speeding up engine repairs and releasing yard locomotives for other duties, electrically-driven *Locomotive Spotters* are helping to keep the Nation's Rolling Stock rolling. Powerful enough to move a giant locomotive, these machines are in constant use throughout the country performing all spotting operations met with in roundhouses and shops.

Accurate electrical controls permit spotting within $\frac{1}{16}$ of an inch, thus eliminating the lost motion usually encountered in setting the valves on locomotives. This precision control is also important in expediting drop pit table work, and in connecting tenders to locomotives without impact after the periodic drawbar inspections.

Powered and Controlled by Westinghouse



Westinghouse motor driving reduction gears on Whiting Locomotive Spotter.

Westinghouse Hoist Motors are especially designed for severe intermittent service where frequent starts, stops and reversals are encountered and high inertia loads must be accelerated.

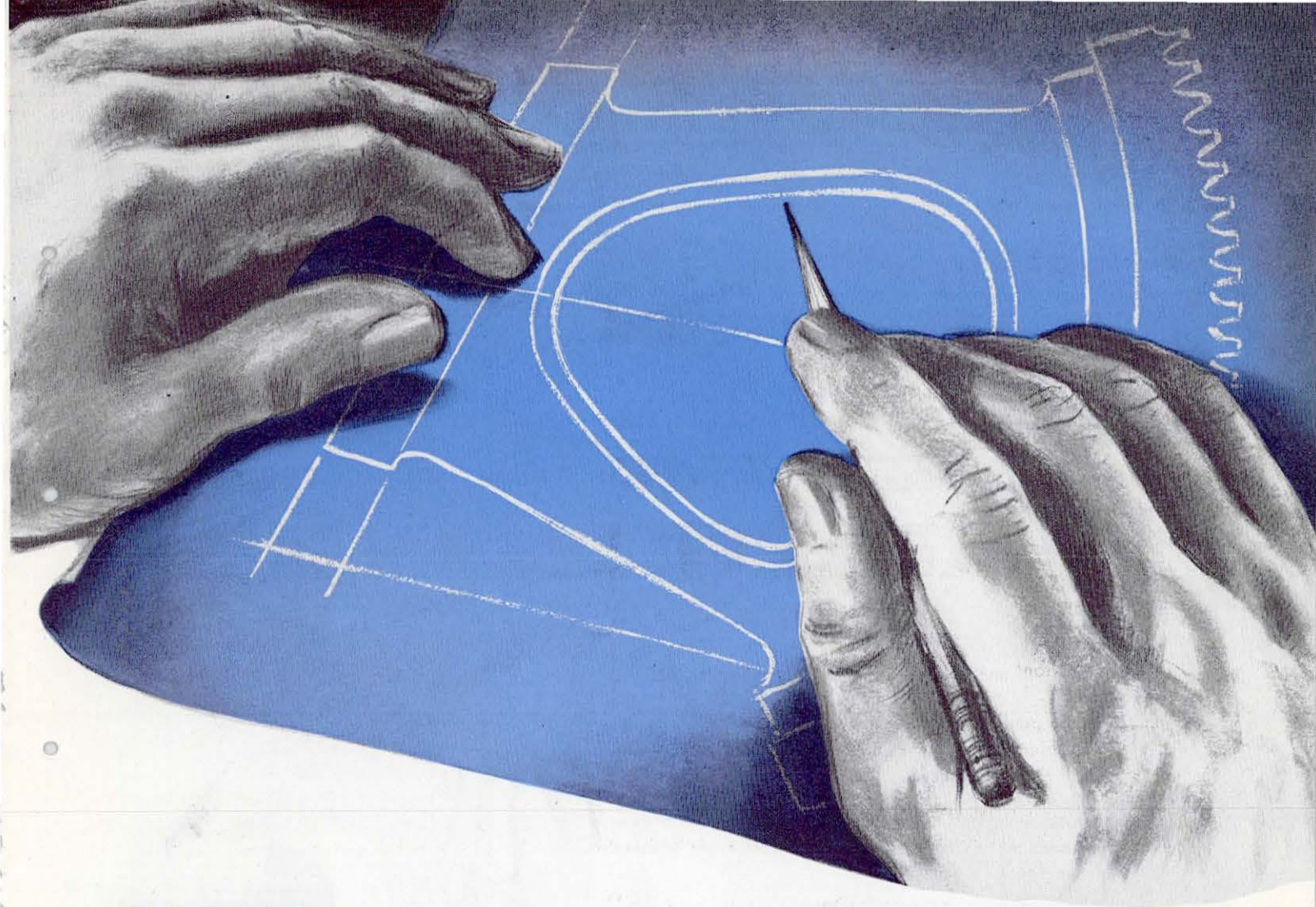
The high resistance motor provides the highest ratio of starting torque to starting current obtainable with a squirrel-cage motor.

In the development of electrical equipment, Westinghouse draws on more than 50 years' experience in adapting electricity to the railroads' needs. This same "know-how" is available to you through our district offices. Get in touch with one of them today, or write Westinghouse Electric & Mfg. Company, East Pittsburgh, Pa.

J-95077

Westinghouse

Time saver for American Railroads



NEW *jobs for "old hands"*

American Steel Foundries is an "old hand" at making steel castings for exacting demands. ★

The war has brought us new problems . . . the production of steel castings for armament, including tanks, gun castings and ship castings.

We have solved these new problems... and have developed castings to meet the requirements of our Army and Navy.

And when the war is over this added experience will be available in the solution of new problems in the railway and industrial fields.

★ *"The Foundries" is an "old hand" at making freight car trucks, Simplex Clasp Brakes, Simplex Snubbers, springs, forgings and steel castings.*

AMERICAN STEEL FOUNDRIES

MONOTYPE* CORDS

with soldered terminals

Built to stand HARD SERVICE!

Railroad telephone and communication engineers find that it pays to specify MONOTYPE cords. They stand up to the toughest kind of punishment, and outlast ordinary cords by a wide margin. Here are some of the reasons for the greater durability of MONOTYPE cords:—

1. The especially TOUGH OUTER BRAID is woven from a material that is infinitely stronger and more resistant to wear.
2. NON-KINKING CONSTRUCTION, different in that the conductors are laid flat instead of being twisted, effectively prevents troublesome kinking.
3. A SPECIAL IMPREGNATION PROCESS, developed by our research staff, guards against insulation troubles and produces insulation resistance much higher under both normal and abnormal conditions.
4. SOLDERED TERMINALS throughout insure perfect connections under all conditions.

You will never know what true cord economy and satisfaction is until you try MONOTYPE cords, and find out their remarkable wearing qualities under your own working conditions.

* *Reg. U. S. Pat. Office*

Send for the MONOTYPE cord chart, listing every variety of trim, length, number of conductors, etc. Sent promptly upon request. →

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MAKERS OF TELEPHONE, SIGNALING AND COMMUNICATION APPARATUS
ELECTRICAL ENGINEERS, DESIGNERS AND CONSULTANTS

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Railway Age

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This article tells how the employees of the Illinois Central are combing the road from end-to-end in the attempt to unearth hidden sources of scrap and locate idle tools and reclaimable materials needed in the war effort.

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Problems involving the conservation of critical materials were among those discussed at the forty-fifth annual meeting of the American Society for Testing Materials, as set forth in this article.

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A report on the sessions held at Washington, D. C., in connection with the Board of Investigation and Research's inquiry into public-aids to the carriers.

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★

The Railway Age is indexed by the Industrial Arts Index and also by the Engineering Index Service

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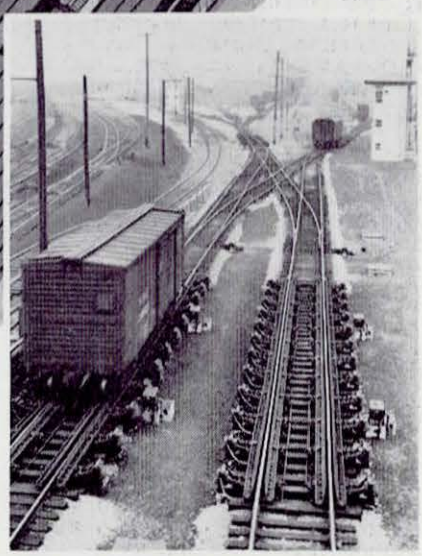
CAR RETARDERS

Improve Yard Efficiency!

YARD delay, including slow classification, is one cause of much idle time and this delay tends to nullify time savings made between terminals through the help of modern signal systems installed to keep trains moving with speed and safety.

"Union" Electro-Pneumatic Car Retarders greatly assist in maintaining an even flow of cars from the receiving yard to the outbound classification yard. A retarder equipped yard is constantly available for classification service and under conditions of heavy traffic this means that cars can be moved without delay. As evidence of how delay time can be reduced, a month's study of one yard showed that cars required an average of 7.42 hours' time to pass through it but that the same yard equipped with retarders reduced this time to 2.29 hours per car, a saving of 5.13 hours per car.

5.13 HOURS PER CAR SAVED



Car hours saved in classification yards will expedite deliveries and make it possible to obtain more transportation service from the existing rolling stock.

2059

UNION SWITCH & SIGNAL CO.

SWISSVALE, PA.

NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

The Week at a Glance

A SHORTAGE IS COMING: On June 1 there were 950 locomotives on order and the War Production Board had promised materials to complete 710 of them. However, A. A. R. President Pelley says it looks like only 425 of these engines will be produced this year. This is less than 45 per cent as many engines as the railroads (always reasonably conservative in these matters) indicated, by their orders, that they expected to need. It is only about 60 per cent of the number of engines for which the WPB itself—with great misgivings on the part of Mr. Eastman—decided to allocate materials this year. From these figures, it is plain that a considerable transportation shortage in 1943 is almost unavoidably in the making. An editorial herein analyzes this situation and concludes that, perhaps, the need for materials for other war purposes is sufficiently urgent that a transportation shortage must be accepted—but it suggests that what seems likely to happen in transportation be not minimized.

●

MOTORISTS HELP HITLER: The automobilist who takes chances at grade crossings today is not only, as he always does, risking his own neck—he may also be piling up a trainload of munitions destined to destroy the country's enemies. D. B. Robertson made an eloquent appeal—based on specific cases and figures—for a public campaign against crossing carelessness in a speech in New York last week, from which we quote briefly herein. He believes this situation is sufficiently important to enlist the co-operation, even, of the President—and he is right. Every delay or damage to war transportation—occasioned by the recklessness of a loyal American—helps Hitler just as much as if one of his saboteurs had done it.

●

MORE USES FOR WELDING: Welding can do a lot more than it is yet doing to put useful life back into materials, suited otherwise only for scrap. It is possible to make this statement with assurance (as is done in an editorial herein) for the reason that on some roads and at some points advanced uses are made of welding for purposes for which, elsewhere, it is dismissed *a priori* as impractical.

●

FINDING BRIDGE MATERIAL: There is nothing new in using "graveyards" of old bridges as a source of material for bridge repairs and strengthening. Now, however, it isn't enough just to pick up from this source the material which is easily adaptable to new work. Instead, as an editorial herein suggests, ingenuity and some work on parts which are to be found in these "old bridge" yards, may well largely increase their usable yield.

●

QUEST FOR SUBSTITUTES: A large number of tentative and temporary standards for materials used by the railroads were dealt with at the recent meeting of the Society for Testing Materials, reported herein. Our account gives, not only a list of some of the more important standards wherein changes have been authorized, but also some of the discussion which reveals the ingenuity with which these specialists are tackling questions of vital current practicality to railroad material-using departments.

●

IT'S GENERAL GRAY NOW: Carl R. Gray, Jr., heretofore in charge of the Military Railway Service (on leave from the executive vice-presidency of the C. St. P. M. & O.) with the title of Colonel, has been raised to the rank of Brigadier-General; headquarters, as before, at St. Paul.

●

CAVEAT ON LOADINGS: Mr. Eastman has warned the railroad analytical fraternity not to be deceived by current carloadings figures. Present totals have been rendered incomparable with those of earlier periods by the enormous increase which has occurred in the average load per l. c. l. car. By the end of May 60 per cent of the Class I roads were loading 20 per cent of their merchandise cars at 10 tons per car or better, and 50 per cent at 8 tons or better. The only safe comparative figures now available are those on tons and ton-miles, if the analysts can be persuaded to wait until these totals are compiled.

●

MAINTENANCE RESERVE: An I. C. C. proposal to permit the railroads to make charges to maintenance expenses in excess of those actually incurred—and to hold such excess in cash or war bonds for subsequent expenditure—has been approved by the general committee of the A. A. R. accounting division. Budgeted or estimated maintenance expenses are exceeding the actual current outlay—not because the work doesn't need doing, but because materials and labor fall short of the requirements. The I. C. C. proposal would recognize this situation for what it is, and provide the carriers with funds with which the deferred work can be done later.

●

SOS OUT FOR RAIL: The need for track for war purposes is so acute that two branches of the War Production Board are working with the railroads to bring in every foot of it which is not doing useful war work. The WPB is not unmindful either, as a news report herein reveals, of the large quantity of rail now being held in unproductive branch line service—but which the I. C. C. has so far refused permission to abandon.

●

TRANSPORT BOARD HEARINGS: The Smith-Webb-Childe Board got under way this week its hearings on what agencies of transportation get how much from the taxpayers—a report thereof appearing elsewhere in these pages. Ingenious—not to say casuistic—arguments were advanced by the trucking fraternity in the effort to minimize their share of responsibility for highway costs.

THE RAILROADER'S JOB: There is a comprehensive 4-page discussion in this issue (page 15) of what, it looks like to us, the railroad man is up against in this crisis—and how to go about tackling it. Constantly improved railroad performance is a product of two factors: (1) *ingenuity* and (2) *publicity*. That is, discovering better ways of doing things, and getting the word around so the whole industry can adopt these improvements. Obviously, now, when a large and sudden expansion in railroad efficiency is required, the way to get it is by a great expansion of ingenuity and a great expansion of publicity. Our discussion goes on to examine how to get this enlarged ingenuity and publicity—and offers the services of these pages to that end. We'd welcome your suggestions and criticisms of our analysis.

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HOW TO FIND SCRAP: The Illinois Central, deciding to leave no refuse dump unsifted, has a full-time, traveling scrap committee on the job for the duration—with results which are pictured and recorded in some detail elsewhere herein.

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EASTMAN'S 827 HELPERS: By June 12 Mr. Eastman had succeeded in expanding the little nucleus of assistants he had last January into a force of 827, and, by next year, he expects to have a thousand more. It is in connection with his rubber conservation duties that he is looking forward toward further additions to his staff. Traffic Direction Director McCarthy thinks he will have to take on quite a few men if he is called on to ration passenger transportation. The ODT has a man looking into all-rail ore handling and another into making up trains for main-tracking.

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INTRANSIT ECONOMY: The railroads are providing storage-in-transit for the Army, at a great saving in time and money to the latter. The carriers, when so directed, put Army freight on the ground—and pick it up again for delivery when instructed to do so, all for a reasonable tariff charge. Failing this service, the Army would have to go to all the trouble to lease or purchase land or warehouse space. Furthermore, the railroads do all the work—saving the Army the expense and inconvenience of getting help and machinery where the stock-piling needs doing. Aside from the gain in convenience, the Army saves about three-fourths the expense which it would incur if it did this work itself. One wonders what the record of other agencies of transportation is in providing such economical ancillary services.

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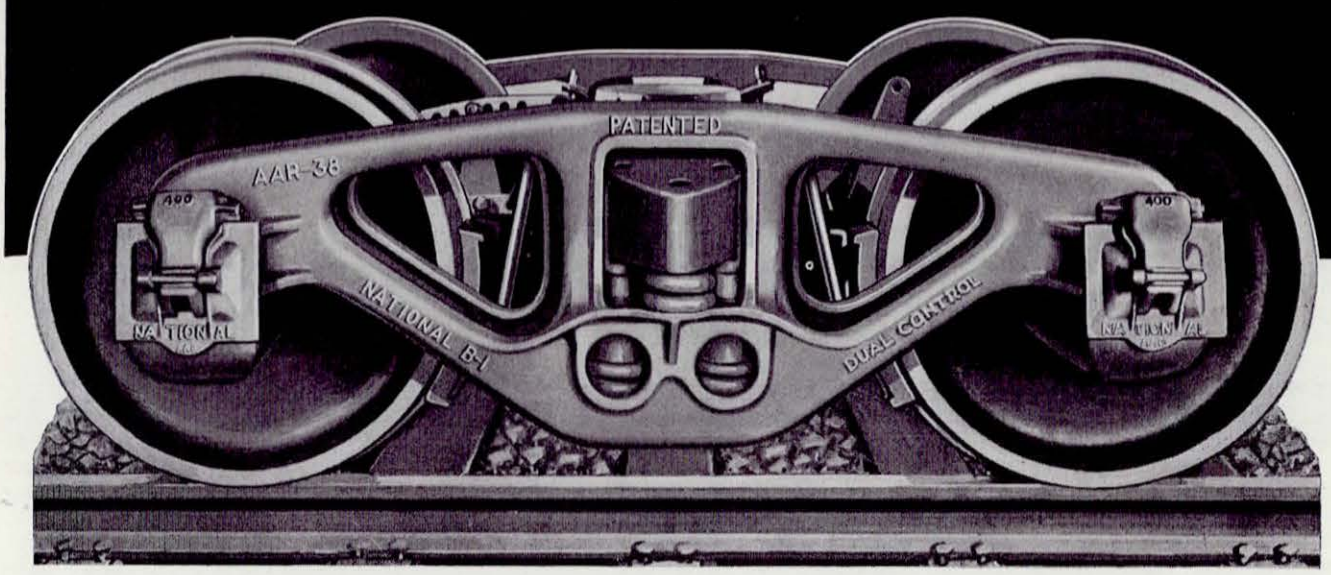
MORE WORK PER ENGINE: Locomotives are, and are likely to continue to be, the tight spot in the railroad handling of peak loads of traffic. A survey of expedients by which more work can be got out of the scarce supply of these machines is presented in these pages—the canvass of the field being the product of a committee of the Superintendents' Association.

NATIONAL B-1 TRUCK WITH DUAL CONTROL



SMOOTH RIDING AT HIGH SPEED

SPRING OSCILLATIONS CONTROLLED

SELF SQUARING

SPRING PLATES NOT REQUIRED

NO SPRING LOSS

QUICK WHEEL CHANGE

LOWER MAINTENANCE COST

SPECIFY NATIONAL B-1 TRUCKS WITH DUAL CONTROL

NATIONAL MALLEABLE AND STEEL CASTINGS CO.

General Offices: CLEVELAND, OHIO

Sales Offices: New York, Philadelphia, Chicago, St. Louis, San Francisco

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RAILWAY AGE

What We Fight For

Our nation being at war again, on this 166th anniversary of the Declaration of Independence, today is a good time to consider what our ancestors fought for, and for what we are fighting.

They fought for *freedom.* "Democracy," for which many say we are fighting, is not mentioned in the Declaration, the Constitution or the national anthems "Star Spangled Banner" and "America." Among men's "unalienable rights" the Declaration names "life, *liberty* and the pursuit of happiness." The Constitution sets forth that it is adopted by "We the people," to "secure the blessings of *liberty* to ourselves and our posterity." To this end "The United States shall guarantee to every state . . . a *republican*" (i.e., a *representative,* not a "democratic") "form of government."

The Constitution requires *freedom* of religion, of speech, and of the press, and provides that no person shall "be deprived of life, liberty or *property* without due process of law; nor shall *private property* be taken for public use without just compensation."

Note that the repeated emphasis is on *liberty, freedom;* that in the Constitution life, liberty and *property* are all assured protection (from government) in *one sentence;* and that in that same sentence *private property* is guaranteed full protection.

The personal freedom and private property guaranteed provide for *free private enterprise.* And free private enterprise is the *necessary* foundation of all the other freedoms. For only under free private enterprise can men make their livings as they please; and to maintain effective dictation of how they shall make their livings government must deprive them of all freedom, by word or act, to oppose its policies.

What our ancestors declared for 166 years ago, and fought for and established, then, was a system of *political* liberty and *free private enterprise.* And that, if we are fighting for the only thing that makes living worth while, is what we are fighting for now.

Our railroads are one of our finest examples of free private enterprise. What they have achieved for the nation during the last two years, and are still achieving, in efficiency and economy, never has been, never could be, equalled in peace or war by any dictatorial government bureaucracy. For it is the result of thousands of widely-scattered *free* men exercising their full initiative and energy in *free* cooperation—which government bureaucracy, by its nature, prevents.

Said the House Committee on Military Affairs in a recent report: "Unbelievable red tape, top-heavy organization and lack of orientation to a state of war still lead the parade in war-time Washington . . . Nearly every conceivable type of extravagant waste has been reflected by these investigations." Nothing of that kind has been, or could be, said about our private-enterprise operation of railroads during the same period.

We will, if we know what we are doing, both "for the duration" and afterward, fight for *freedom* as meant by the Declaration and the Constitution—*freedom from domination of person or property by any government,* foreign or domestic—and fight as hard for it at home as abroad.

More Equipment — or Else

The brief strike of coal miners in the Pocahontas region this week was a forcible reminder that interruptions of production of commodities requiring open top freight cars could cause serious car shortages this year. And the fact should be emphasized now that the danger of shortages of both locomotives and open top cars in 1943 is daily increasing.

Undoubtedly the War Production Board knows better than anybody else all the war demands for scarce materials. But the Board and all concerned with inland transportation should know that if government estimates of probable production and traffic in 1942 and 1943 are dependable, shortages of locomotives and open top cars cannot be avoided unless, first, uninterrupted opportunity is afforded for keeping all available equipment moving, and, second, the Board shall very soon make available much larger quantities of materials for locomotive and car building.

The railroads have been moving all the coal the country's mines could produce. In the first twenty-five weeks of this year coal loadings increased over 20 per cent. But when this strike in the Pocahontas mines occurred the surplus of cars for handling coal was only half as large as a year before and hardly any larger than at the 1941 peak of traffic in October. The situation as regards the supply of open top cars even for the rest of this year cannot be considered favorable; and interruptions of production, making such cars idle even for brief periods, could cause serious transportation trouble next fall.

As to 1943, the prospects are very unpromising. Lack of locomotives would cause or aggravate a "shortage of cars" because of inability expeditiously to move even the cars available; and a shortage of locomotives next year already is probable. On June 1—as President Pelley of the Association of American Railroads pointed out in a recent letter to Senator O'Mahoney—there were 950 locomotives on order, and there remained authority, under allocations of the War Production Board, to build 710. These 950 locomotives would not have been ordered by the railways excepting in the belief that they would soon be needed. But Mr. Pelley said it looked as if only 425 would be produced in the last seven months of this year—525 less than were on order June 1, and 285 less than the number for building which in 1942 materials have been promised.

If enough locomotives and freight cars to handle the estimated traffic of 1943 are to be provided, the materials for them must be furnished and the building of them well started in the latter half of 1942. This is the carefully weighed opinion of every informed authority on the subject. Past and continuing increases in the efficiency of railway operation have surpassed all reasonable expectations. But neither the War Production Board nor anybody else can enable, or compel, the railroads to accomplish the physically impossible.

A shortage of railway transportation may be so preferable to continuance of other existing shortages as to justify deliberately creating it. But the shortages of fuel, raw materials and finished products for military or civilian purposes, or both, that a shortage of railway transportation would cause should be anticipated and squarely faced now—and full responsibility for them assumed now and in future by those who alone can yet prevent them.

Accidents vs. War Efficiency

Here is what happened to national efficiency in winning the war recently when a serious accident due to no failure of railway management or employees interrupted service on an important railroad artery:

Ten cars of an eastbound freight train were derailed in the path of a heavily-loaded westbound passenger train, of which one coach was overturned, a baggage car was "jack-knifed," and the locomotive and five cars were derailed. Fortunately, while 40 persons were injured or shocked, no one was killed.

But consider the hindrance to the war effort caused by even so relatively "harmless" an accident, thousands like which occur. This double-track route to the West Coast was completely tied up for 12 hours, and its traffic (to an important extent, *war materials and military personnel*) was seriously delayed for three days more, while trains crawled by on a "shoo-fly." Several cars were destroyed beyond repair—and they cannot now be replaced to serve essential traffic, because materials and manufacturing facilities must be used for products (ships, tanks and planes) held by the War Production Board to be more urgently needed than railroad cars.

And this leaves out of account the hundreds of man-hours of work by skilled railroad men required to remove the effects of the wreck—scarce labor-time which ought to be spent on constructive work in the national interest. Yet this was a "lucky" accident. Consider the much greater damage which such a pile-up might logically have been expected to entail. Suppose the derailed freight cars had been carrying explosives. Suppose the passenger train, instead of being composed of the strongest, most modern rolling stock, had consisted of less sturdy cars, many of which present necessity is calling back into service?

Every such accident on a vital transportation route is now a Pearl Harbor in miniature. And consider the cause of this one—*three youths in an ancient jallopy crashed into the moving freight train at a grade crossing.* These young men were, undoubtedly, according to their lights, loyal American citizens—but a type of which Hitler wishes we had more. To win the war, the nation needs patriotism that will be sane at home as well as brave at the front.

The incident outlined was recounted by President D. B. Robertson of the Brotherhood of Locomotive Firemen & Enginemen in his address at the award of the Harriman Safety Medals in New York last week—

about which further details are given elsewhere in this issue. The railroad on which the accident occurred was the Union Pacific, of which the president, W. M. Jeffers, collaborated with Mr. Robertson in marshaling the facts upon which he based his persuasive appeal, in the national interest, for a vigorous campaign for the prevention of such accidents.

The campaign for safety should be pressed with unrelenting energy on the railroads. But it must include efforts to influence public officials and the general public. Railroad managements and employees can reduce accidents due to railroad operation; but they cannot reduce accidents interfering with essential war-time railroad operation caused at grade crossings and elsewhere by reckless public disregard of safety and failure of public officials to enforce laws for promoting it.

Welding for Victory

The stern necessity for the conservation of ferrous materials in this war emergency makes it advisable to salvage and reclaim parts to an extent that would not be justified under normal conditions. The more extensive use of welding in the fabrication of equipment has also been found in some instances to make possible a considerable reduction in the weight of material.

The railroad mechanical departments were among the first to use oxy-acetylene and electric welding on a large scale. It is significant, however, that some roads are using such welding and cutting processes far more extensively than others.

"It will not do to turn down a proposal arbitrarily just because someone has previously tried it and says, 'It can't be done.'" The truth or force of this statement, made by Leland E. Grant, engineer of tests of the Chicago, Milwaukee, St. Paul & Pacific, in discussing the possibilities of welding in railroad shops, is evident to those who have found a particular practice being used successfully on one railroad, or at one point, which has been decided to be impracticable at other places. This fact emphasizes the need for a thorough investigation of all of the factors involved in successful welding, in order that they may be so adjusted as to insure the best possible results.

Mr. Grant, in an article in the June Railway Mechanical Engineer, made this significant statement: "If all the American railroads were to adopt immediately only those cutting and welding procedures now in successful use in the various railroad shops of the country, the aggregate savings would be enormous."

The problem of training welders is not as difficult as might appear at first glance, and this is particularly true if care is taken in selecting men with certain characteristics or aptitudes. It is interesting to note, also, that with the growing shortage of men within the age ranges from which it is found best to select welders, there has been an attempt on at least one railroad to use women for this work. It is said that in some respects they are better fitted for it than men.

Old Material for Bridges

For many years it was truthfully said that the track, and particularly the rail, had never caught up with the locomotive; and it did so only recently. In some measure this could also have been said of bridges; for a multitude of such structures have been replaced because the weights of locomotives and cars out-ran their load-carrying capacity.

A commendable practice of long standing is that of utilizing on less important lines, where traffic is less, locomotives are lighter and speeds are lower, bridges that have been released from important main lines. In some cases, however, new conditions created by military necessity have brought a surge of traffic to secondary lines, to which bridges have been transferred, that has placed them in the same position with respect to loading that they occupied in primary service before they were replaced. Neither time nor material is now available to replace these structures; yet service on the lines where they now are cannot, because of slow orders or engine restrictions, be allowed to fall below the standard demanded by military considerations. This condition is not confined entirely to secondary lines. Some bridges on main lines have also reached the stage when they need to be replaced or strengthened.

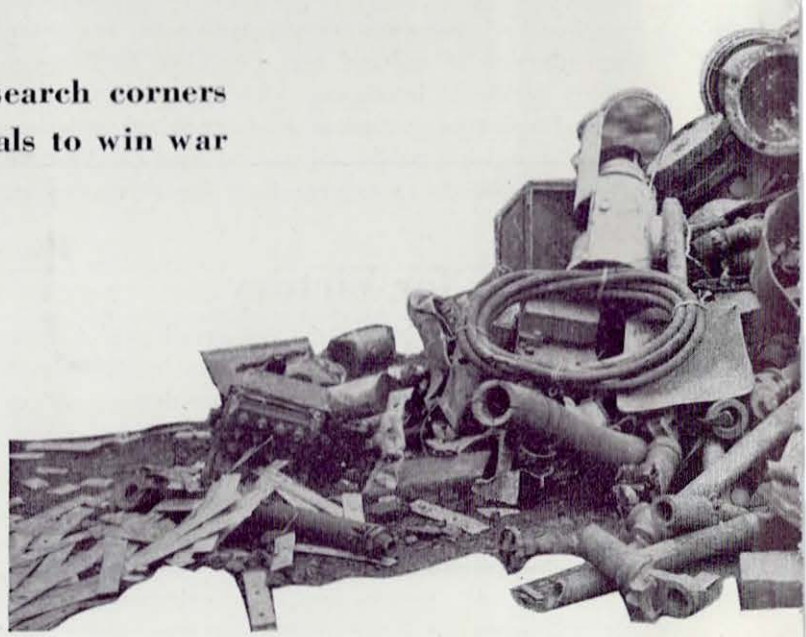
In recent years the practice of welding additional metal to weak members has saved for further primary service many bridges that only a few years earlier would have been replaced as too light. In not a few instances the structures under discussion can in this way be strengthened to permit removal of all restrictions. But new plates and shapes for welding additional metal to weak members are only slightly less difficult to obtain than for new spans; and even when they can be obtained, deliveries may be delayed.

The bridge departments of the railways are for these reasons being thrown largely on their own resources. There are few roads of any size or importance, however, that do not have "graveyards" of old bridges which they keep as sources of materials that can be reused. While such materials have been used advantageously for a wide variety of maintenance purposes, usually, because of limitations of dimensions, and frequently because of punching or corrosion, only a small percentage of the salvageable material from these sources has been used for the class of work under discussion.

In the emergency now confronting the railways with respect to the procurement of materials, it is possible that methods can be developed that will permit the use of a larger part of this salvageable material for the strengthening of bridges than has heretofore been considered feasible, and also for other purposes for which new materials have previously been deemed necessary. In any event, the railways are confronted with a situation that must be met in some way; and these "old bridge" yards can be made to pay dividends the size of which will depend on the ingenuity developed in using the resources they contain and on the amount of critical materials thereby saved.

SCRAP FOR VICTORY

Illinois Central employees search corners and mine dumps for materials to win war



IN the interest of conservation and to assist in producing scrap and other materials needed in the war effort, the Illinois Central is carrying on a system wide clean-up program which is distinctive for its early start, the thoroughness with which it is being conducted and the spirited way in which the employees of the railroad are co-operating in the greatest treasure hunt which has been held on the railroad—at least since the last war.

Under the impetus of the National Emergency, the railroad is being combed from end to end, both in unearthing hidden sources of scrap and locating idle tools and reclaimable materials, which have not only exceeded the expectations of the management but have surprised the salvage forces. No effort has been made to separate the materials from those recovered in the usual manner, but it is estimated that the campaign produced several hundred carloads of remote scrap during the first three months of this year, together with large quantities of materials which can be reconditioned for further use on the railroad, or about 25 per cent of all scrap handled during this period. In the three years since 1939, the first year of the war, the railroad sold over 330,000 tons of iron and steel scrap, including scrap from retired equipment, and over 7,500 tons of non-ferrous scrap.

The drive was begun in 1941 with a hand-bill announcing that July and August would be set aside for a thorough-going scrap clean-up campaign, and appealing to all employees to enter the work whole-heartedly. This hand-bill, which was in the form of a joint message from the heads of the operating, purchases and stores and maintenance of way and construction departments and was entitled "Let's clean up scrap," explained that the campaign would first, serve national defense by producing scrap needed by manufacturers of guns and munitions and parts for ships and planes, second, enable the railroad to move scrap before cars were badly needed for other shipments and third, place additional cash in the treasury for unusual expenditures.

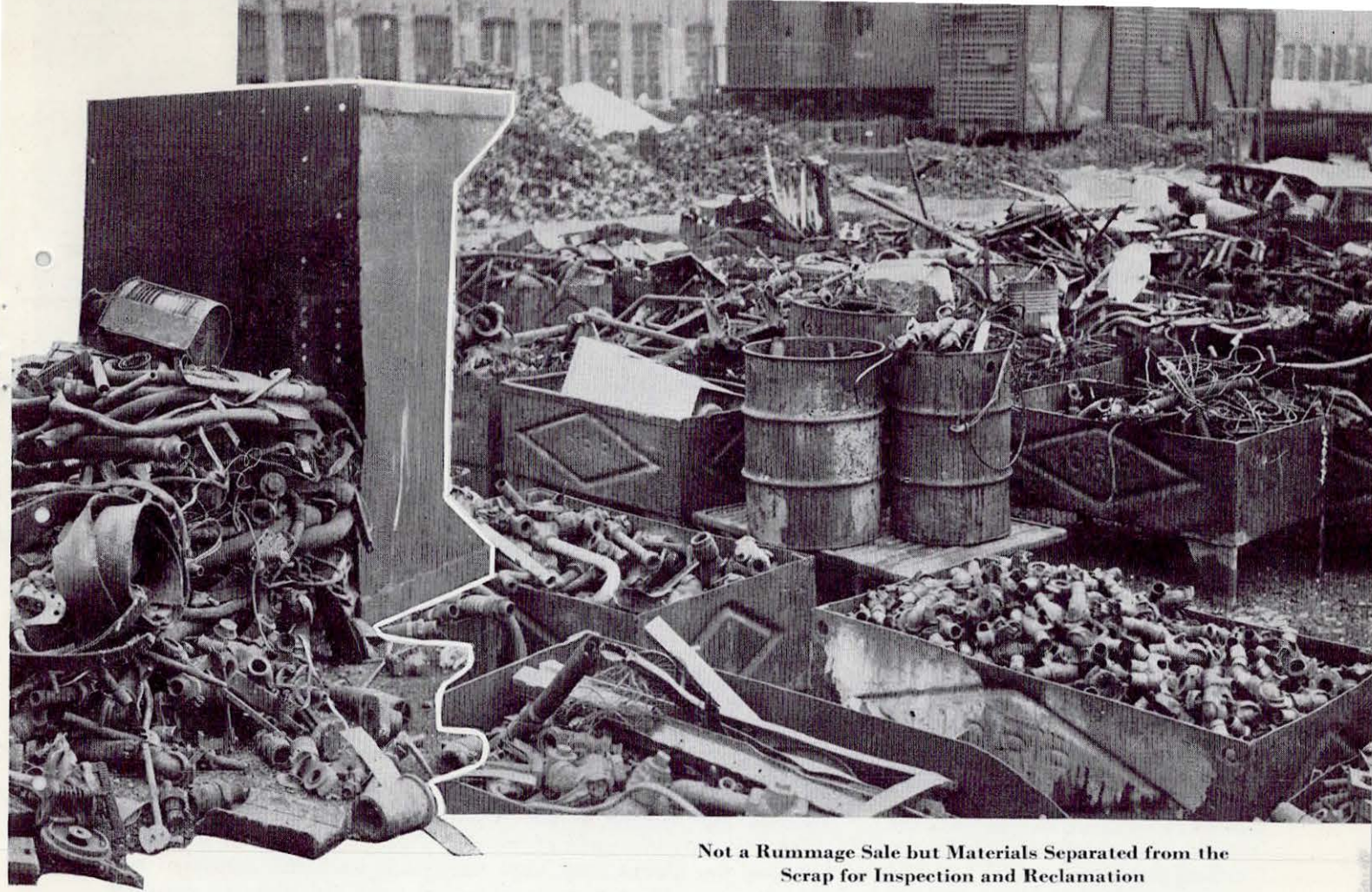
Campaign "for the Duration"

This campaign was productive, but the attack on Pearl Harbor in December intensified the importance of scrap and conservation, and it was felt that quantities of materials useful to the railroad or to smelters remained in hiding and that the search should be continued. The drive was therefore resumed on February 10, 1942, this time under the leadership of a special scrap committee, consisting of the general storekeeper, as chairman, and representatives of the bridge, building, locomotive, car, water and signal departments.

The committee, which was appointed for the duration of the war, was assigned a business car and immediately began a tour of the railroad, meeting local supervisors enroute and stopping from one to five

Leaders in the Scrap Drive

Left to right, seated—C. R. Wood, mech. insp.; S. F. Grear, asst. engr. bridges; G. D. Tombs, trav. stkpr.; W. S. Morehead, gen. stkpr. (chairman); C. A. Shaffer, gen. mach. superv.; D. J. Jones, mech. asst.; J. H. Butridge, ch. sig. insp. Standing—Storekeepers C. S. Burt, B. T. Adams, J. W. Cockrill, O. O. Albritton, B. G. Imre, E. S. Shapland, J. W. Miles, G. W. Schroeder and W. P. Stewart.



Not a Rummage Sale but Materials Separated from the Scrap for Inspection and Reclamation

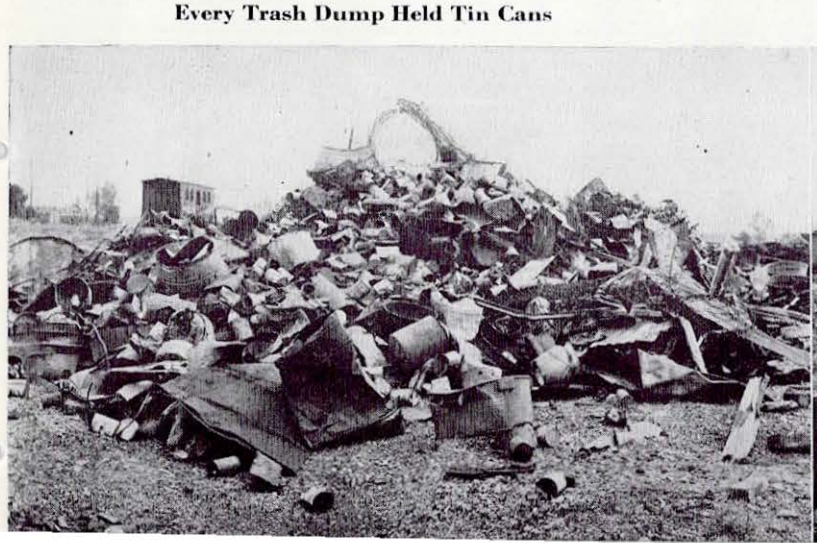
days at forty principal points on the railroad to explain the program, give it the initial drive and make a minute inspection of the premises, which often included visits by automobile to facilities several miles distant. Divisional forces were given several days' notice of the committee's coming so that the campaign could be thoroughly discussed, organized and set in motion locally and, at each point, the committee was accompanied by the superintendent, master mechanic, divisional engineer and other divisional officers in going over the ground.

The committee was given wide latitude in deciding on the spot what materials should be picked up, and every effort was made to enlist the full co-operation of supervisors and all employees handling material. Even the original plan to keep reports of conditions found was abandoned to allay any fears that any department or individual would be criticized. The committee also stayed together whether the subject of inspection was a machine shop, a tool room, a roundhouse or water station. In this way, it had the benefit of varied points of view at all times, and each member was a check on the others. Veteran employees were particularly encouraged to assist in locating forgotten sources of scrap material, and some employees were paid for unusually valuable suggestions in the interest of conservation. Mealtime, when over twenty officers were often together both at terminals and enroute, was a fruitful source of information to the committee.

Open Lockers

Shops, power plants, roundhouses, water stations, depots and coal and water stations were all visited and any tools and materials not required were removed.

Every Trash Dump Held Tin Cans



Auto Bodies Came in Other Scrap

Old Pipe Lines Enlarged Scrap Pile

Rubber of All Kinds was Picked Up

Blacksmith shops and shop lockers proved to be large sources of dies and tools and also tool steel, which is now difficult to obtain. All lockers were not necessarily opened by the committee but when the inspection of lockers chosen at random indicated a condition warranting an investigation, arrangements were made to have all lockers opened and thoroughly inspected.

Repeated cases came to light where the emphasis in the clean-up program had been placed merely on sweeping up refuse and otherwise tidying up the premises rather than in gathering up idle or scrap materials, but spirited co-operation in this phase of the campaign was obtained when employees learned that the drive was in the National interest. One foreman, after hearing the committee, recalled that he personally had two sons and one son-in-law with the armed forces in the southwest Pacific and "reckoned" that if soldiers and sailors could risk their lives fighting for their country, he and his men could support the drive for materials they needed.

The committee was also on the lookout for hidden sources of materials and thoroughly inspected the grounds and ransacked old buildings for them. Time after time, by accident or as a result of clues supplied by employees (often employees who had been transferred to other locations), the treasure hunt led to imposing quantities of materials of which local forces were unaware. At one point, a man-hole over an underground steam tunnel led to a large collection of reclaimable valves and pipe fittings of all sizes. In another place, the search brought to light a stock of dies and shop tools which had been hidden for years. Quantities of telegraph, telephone and signal supplies were returned to stock. In two dust-covered boxes in the attic of another building, the committee found in good condition $700 worth of parts for a machine tool which was no longer in use in that locality but the materials for which were needed at that time in another shop. Old record rooms and old underground passages for pedestrians all yielded material.

Rich Yield from Abandoned Buildings

Buildings, which have been abandoned but never removed, were targets of investigation and proved a fruitful source of metal. Those for which there was no longer any need but which were still standing, were surveyed as a unit for the scrap materials they contained and steps taken to have them retired and demolished. They produced hardware, electric wire, piping for gas illumination, water lines and plumbing fixtures. Piping for abandoned facilities in modernized buildings was inspected and ordered removed for reconditioning or for disposal as scrap. Instances where water, air, steam and oil lines had been left in the ground at the time old pump houses and other buildings were removed were numerous. Some of this piping is 6 ft. underground. Such equipment is now being released as scrap or as re-usable material, even though the cost exceeds the price obtainable for the scrap. In one instance, this work involves the digging up of 1200 ft. of 24 in. cast iron pipe.

Industry tracks and other secondary tracks of the railroad which are not in actual use are under investigation and steps are being taken for their removal as a source of rail for use elsewhere on the road or for disposal as

Tons of Rail were Shipped to Yards

Scrap Copper Collected for War

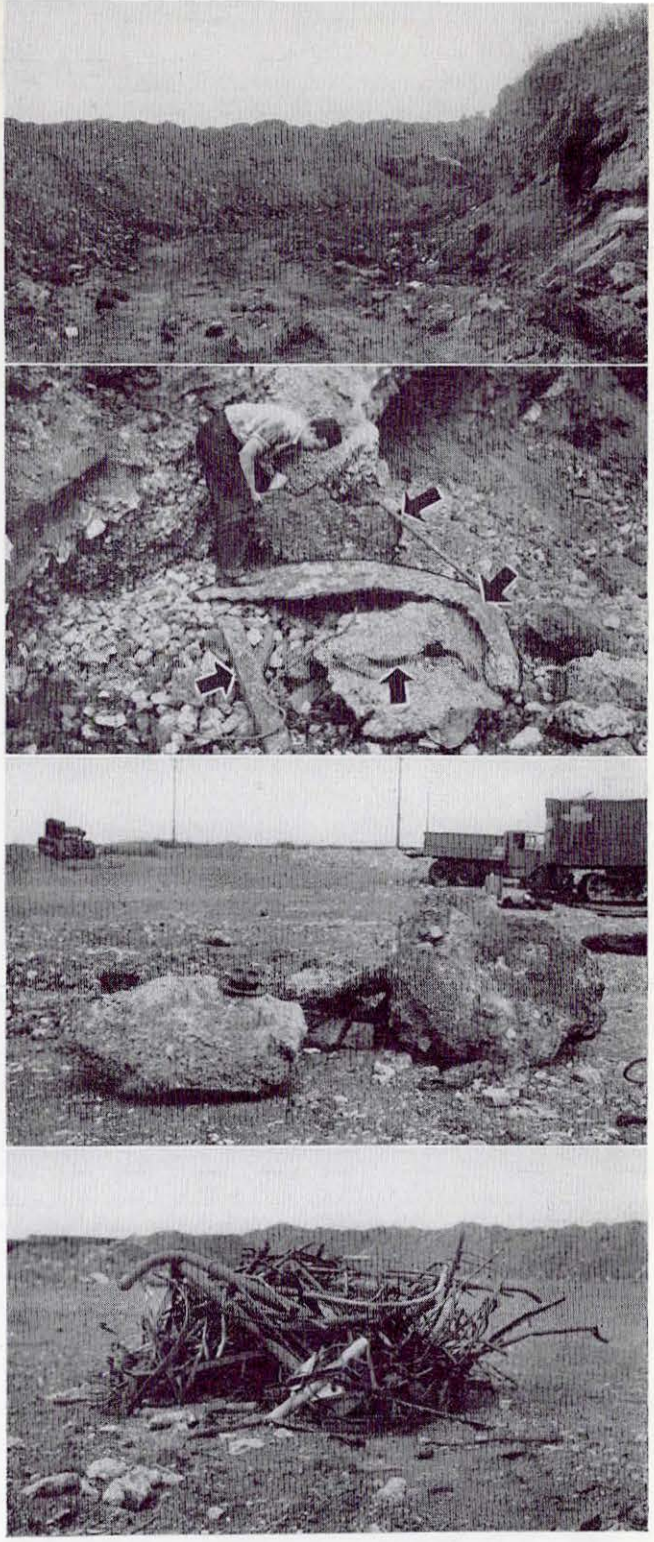
relay rail or scrap rail which is now in great demand. The railroad furnished over 25,000 tons of 90 lb. rail to military projects in 1941. Tracks, which were partially or completely buried in mud, have been removed. Quantities of scrap rail which had been used as planking at street crossings have been taken up, and the clean-up includes unclaimed rail crossings in joint facility territory.

Pay Dirt in Trash Dumps

The drive also extended to leased warehouses containing equipment and fixtures which are not now in use and could be removed without inconvenience to or objections by the occupants, and it particularly included trash dumps along the right-of-way or in the vicinity of new and old engine terminals. Many of these dumps contain galvanized sheet, wire cable, banding iron, rubber hose, dry cell batteries and other materials which had no value when discarded, but they were also found to contain iron pipe, journal boxes, couplers and quantities of iron and steel scrap and brass, often in quantities which more than offset the cost of removing the material. In one case, a dump which was thought by some to have been completely cleaned out after the removal of 36 carloads of scrap in 1941, yielded 356 tons of No. 2 sheet scrap, 21 tons of miscellaneous iron and steel scrap, 100 lb. of scrap journal brass and 200 lb. of No. 2 brass, having a total salvage value of $2,961, as compared with the cost of $1,533 for mining, sorting and loading all the material, thus netting a saving of $1,427. At another point, acres of fill up to 10 ft. or more in depth, consisting largely of dross and slag from a steel mill, but also containing wire cable, piping and other finished metal, is now being mined by power shovel at the expense of the steel mill and has already produced six carloads of "pay dirt."

Along the line of road, section tool houses and outfit cars were re-examined and the right-of-way searched from fence to fence by local forces, who understand in this drive that unused or waste materials of all descriptions should be picked up or reported to the committee. As a result, carloads of scrap were obtained which not only include railway waste but also tin cans, automobile bodies and other materials placed by persons who have used the railroad land as a dumping ground. The hub of a large ship propeller, weighing five tons, and also bridge tender lamps are examples of materials found in these hunts.

As rapidly as the material is picked up, it is moved to the nearest scrap yard, of which there are several on the railroad, all operating under the direction of the stores department. Much of the smaller material from the shops, especially old tools, brass and hose, is delivered directly to the storehouses in trailers or skids, while bulky material and practically all materials from the line of road are shipped to the scrap yards in cars.



Mining a Fill for Metal

From Top to Bottom—Section of Cut Behind Shovel, Pieces of Iron and Steel Before Removal, Heavy Pieces Removed for Loading, Miscellaneous Scrap Recovered.

Sorting and Grading in a Scrap Yard

Materials received at scrap yards are unloaded and sorted to separate all good and repairable materials from the scrap, while the scrap is graded and otherwise prepared for sale or other disposition in the same manner as all other scrap is handled by the railroad. At these scrap concentration points, structural steel, cast iron

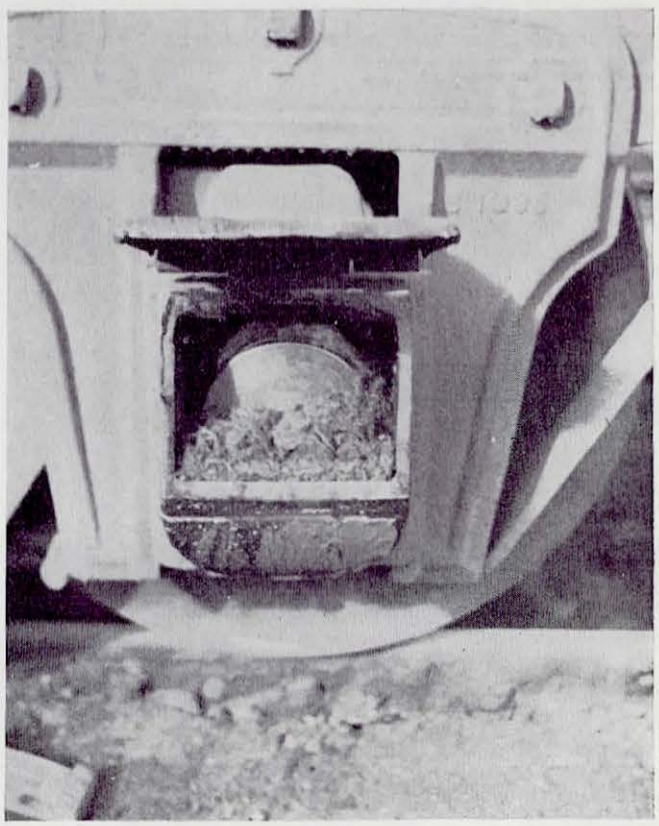
pipe, machinery and other bulky materials that are susceptible of further use are usually stored at the scrap yards for future inspection and disposition, while the smaller material and all tools and non-ferrous material are shipped to reclamation plants, the largest of which is at Burnside in the vicinity of Chicago. Here, the material is inspected as rapidly as the volume of work permits, the good material being returned to the storehouses, other material and equipment repaired, reconditioned or converted and the scrap sold. At present, partly as a result of the scrap drive, the plant at Burnside, which is a concentration point for all angle cocks, brake beams, hose, roadway tools and material and all non-ferrous metal and is one of the largest plants of its kind in the country, has scores of boxes containing tons of brass castings, copper wire and large quantities of miscellaneous materials. The inspection and reconditioning of this material will require months of time and its cost will exceed the value of some of the material but the additional expense, if any, will be considered part of the railroad's contribution to the war effort.

In addition to increasing the supply of scrap and reclaimable materials, the drive, it was pointed out, has been more effective in impressing employees with the importance of scrap and teaching them how to conserve materials at this time than any amount of written instructions in the form of letters to individuals or placards on bulletin boards, and it is proposed to follow up the campaign by arrangements to keep alive the interest in this work for the duration of the war.

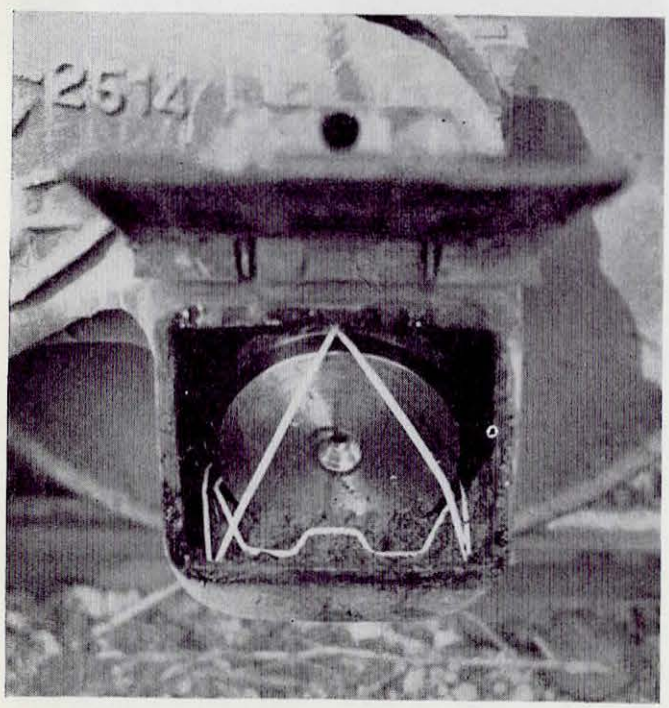
Packing Retainer Spring

A RELATIVELY simple and inexpensive design of packing retaining spring, developed recently by the Spring Packing Corporation, Chicago, is designed primarily to reduce the danger of waste grabs and materially reduce the labor cost of servicing railway car journals, both passenger and freight. The retainer is made of spring-steel wire, formed and applied in the front of the box, as shown in one of the illustrations. It is designed in a manner so as to overcome the tendency of packing to work forward from under the journal—and then to roll and climb up in front of the box and become the cause of waste grabs unless constant care is exercised by car oilers to put the packing box in its proper place.

A front plug is sometimes placed in the box to hold the main body of the packing back under and firmly against the journal but, unfortunately, the plug itself often works up and permits the balance of the packing to become displaced. The new packing retainer spring, interchangeable in one size for both 5-in. by 9-in. and 5½-in. by 10-in. journal boxes, is applied on top of the front plug and extends around back of the collar. In case a front plug is not used, the main body of the packing is extended out to the front of the box and the spring applied over it.



Conventional Journal Box with Loose Front Packing which Causes Hot Boxes



The Packing-Spring Retainer Applied to Hold the Packing in Place

When the two ends of the spring are placed in the hole in the end of the wedge, this applies a strong pressure which keeps the packing in the front of the journal box firmly in place, thus holding back the packing under the journal and keeping it in compression. Most rolling of packing starts at the collar of the journal and the new packing retainer spring is intended to prevent that condition from developing.

The device does not interfere with the use of a packing iron to adjust the packing alongside the journal, nor does it interfere with oiling or inspection of the side of the bearing.

If necessary to remove the packing the spring is easily removed.

Railway Laboratories are Contributing Much to the Solution of War-Time Material Problems

Materials Specialists in Quest of War-Time Expedients

Measures for conserving critical items among subjects the American Society for Testing Materials discusses at annual meeting

THAT the functions and activities of the American Society for Testing Materials are now being devoted to a considerable extent to the solution of problems involving critical materials that have come about as a result of the war was demonstrated by the program of the forty-fifth annual convention at Atlantic City, N. J., on June 22-26. The outstanding fact developed at the meeting is that the society is playing a vital part in furthering the war effort through the conservation of critical materials by effecting emergency changes in a large number of specifications, many of them involving materials of direct or indirect importance to the railways. Also, that the members of the society are fully aware of the importance of their work, was demonstrated by the fact that a total of 1,376 members and guests registered at the meeting, this total being only slightly less than the all-time high.

Eighteen Separate Sessions

More than 100 technical papers and committee reports were presented at the meeting, which took the form of 18 separate sessions. Aside from these larger group gatherings, approximately 150 meetings of technical committees and subcommittees were also held during the five-day period. Not only was the convention of outstanding importance this year because of its relation to the war program, but it was also of unusual significance by virtue of the fact that the society will issue its book of standards, a triennial publication, in November of this year, and it is necessary for the committees to get their specifications into final shape for inclusion in this book.

In the election of officers, H. J. Ball, professor of textile engineering, Lowell Textile Institute, Lowell, Mass., was chosen president, and P. H. Bates, chief, Clay and Silicate Products division, National Bureau of Standards, Washington, D. C., was elected vice-president. Because of the uncertainties of the times, no definite decision was reached regarding the date and place of the annual meeting for 1943.

Conservation of Scarce Metals

For the most part, and in accordance with the usual practice of the society, the activities of the meeting consisted largely of the consideration of specifications for, and methods of testing, a wide variety of materials, although, as indicated at the outset, these activities, in a number of respects, were keyed directly to war-time problems. For example, an entire session was given over to a discussion of the problems of conserving the critical metals that are employed in producing steel alloys, some of which are used by the railroads in considerable quantities. Although it dealt largely with the nature and applications of the so-called "8000" series

of alternate alloy steels, the discussion included consideration of various other phases of the problem, such as the status of the raw materials considered necessary for steel manufacture; the accomplishments of the steel manufacturers in conserving manganese, aluminum and other strategic elements heretofore considered necessary in making steel; and the application of stainless steel to conserve those elements heretofore considered necessary in the manufacture of corrosion or heat-resisting alloys. Representatives of the War Production Board, the armed forces, and of various steel manufacturers and other compaines participated in the discussion, which was "off the record."

Also of considerable interest to railroad men was a round-table discussion on the solvent action of water vapor at high temperatures and pressures, which was arranged by the Committee on Water for Industrial Uses. Attention in this discussion was focused on the problems resulting from the use of boiler water at temperatures approaching the critical point and of superheated steam. In addition, the program included a symposium on radiography, which was considered particularly timely in view of the growing use of this nondestructive method of testing many materials that are vital to the war effort.

Executive Body Discusses War-Time Role

The extent to which the activities of the society have been affected as a result of the war emergency was brought out in the report of the Executive committee, which revealed that the society is fully cognizant of the fact that it is in a position to render valuable service in promoting the war effort. Summarizing the various steps that have been taken toward this end, the report described how the research activities and facilities of the society have been enlisted in the war program, and how its standardization activities have been affected by the emergency. The most important developments in this latter regard are the steps that have been taken to expedite the promulgation of emergency alternate provisions in existing standards in the interests of material conservation and of speeding up procurement. Such provisions in existing standards or specifications are for use where they may be considered by the purchaser of the material as a permissible alternate for the specific application or use desired.

It was explained that such emergency alternate provisions shall first have the approval of the appropriate subcommittee of the sponsoring committee and the endorsement of the chairman of the main committee. After the emergency provisions have been submitted to the committee on standards for approval for publication, they are published with the specification, either in the form of a pink sticker or as an accompanying sheet. It is of interest to note that to date about 50 specifications have been affected by emergency alternate provisions, and that a number of these have been specifications for materials used extensively by the railroads.

Iron and Steel

Several sessions of the convention were devoted to a consideration of committee reports and papers dealing with iron and steel and their alloys. The Committee on Steel announced that it had made extensive use of the procedure established by the society to effect emergency alternate provisions. Among the specifications in which such provisions have been made are a number of direct interest to railroads, including those for open-hearth carbon-steel rails, steel tie plates, carbon-steel and alloy-steel castings for railroads, axle-steel bars for concrete reinforcement, hot-worked high-carbon steel tie plates and heat-treated carbon- and alloy-steel track bolts and nuts. The emergency alternate provisions applying to rail and track accessories were effected at the same time that the American Railway Engineering Association was taking similar action.

The committee pointed out that the emergency provision for tie plates, by eliminating references to copper, tend to conserve this element. Other changes included the deletion of references to alloy-steel track bolts in the specifications for heat-treated carbon and alloy-steel track bolts and nuts, and a modification of the requirement on wrench-fit tightness of nuts, these being in line with the basic aim of the emergency provisions. The committee also stated that several emergency provisions that have been incorporated in the rail specifications will tend to help in procurement by effecting changes in those sections covering chemical composition, drop test, the requirements on progressive all-ingot nick and break tests, and by deletion of the Brinell hardness requirement. The committee explained further that the inclusion in the rail specifications of recommended practices for controlled cooling adds desirable information.

Turning to the routine activities of the Committee on Steel, the report contained numerous recommendations in the form of revisions in tentative standards and standards, tentative revisions of standards, the adoption of tentative standards as standard, and the adoption as standard of tentative revisions of standards, many of which were of direct or indirect interest to the railroads. In addition, the committee reaffirmed certain specifications which had stood for six years or more without revision, this being done on the assumption that these specifications are in line with present practice. A partial list of the specifications affected by these recommendations follows:

Revisions of Tentative Standards

Atomic-hydrogen-arc-welded and electric-resistance-welded alloy-steel boiler and superheater tubes.

Light gage structural quality flat hot-rolled carbon steel (0.2499 in. and 0.0478 in. in thickness).

Light gage structural quality flat rolled carbon steel (0.0477 in. to 0.0225 in. in thickness).

Seamless alloy-steel pipe for service at temperatures from 750 F. to 1100 F.

Seamless alloy-steel pipe for service at temperatures from 750 temperatures from 750 F. to 1000 F.

Revisions of Standards, Immediate Adoption

Chromium-vanadium steel bars for springs.

Seamless alloy-steel boiler and superheater tubes.

Welded and seamless steel pipe.

Molybdenum-steel plates for boilers and other pressure vessels.

Low-carbon nickel-steel plates for boilers and other pressure vessels.

Alloy-steel castings for valves, flanges, and fittings for service at temperatures from 750 F. to 1100 F.

Lap-welded and seamless steel pipe for high-temperature service.

Tentative Revisions of Standards

Welded and seamless steel pipe.

Lap-welded and seamless steel pipe for high-temperature service.

Adoption of Tentative Standards as Standard

Low-alloy structural steel.

Carbon-steel forgings for locomotives and cars.

Alloy-steel forgings for locomotives and cars.

Adoption as Standard of Tentative Revisions of Standards

Steel for bridges and buildings.
Structural steel for locomotives and cars.
Carbon-steel forgings for locomotives and cars.
Alloy-steel castings for structural purposes.
Welded and seamless steel pipe.
Lap-welded and seamless steel and lap-welded iron boiler tubes.
Seamless alloy-steel boiler and superheater tubes.
Boiler and firebox steel for locomotives.
Electric-fusion-welded steel pipe for high-temperature and high-pressure service.

Reaffirmation of Standards

Open-hearth steel girder rails of plain, grooved and guard types.
Low-carbon steel joint bars.
Medium-Carbon steel joint bars.
Soft steel track spikes.
Steel screw spikes.
Steel tie plates.
Low-carbon steel track bolts and nuts.
Rail-steel bars for concrete reinforcement.
Cold-drawn steel wire for concrete reinforcement.
Axle-steel bars for concrete reinforcement.
Fabricated steel bar or rod mats for concrete reinforcement.
Welded steel wire fabric for concrete reinforcement.
Carbon-steel axles for cars and tenders.
Austenitic manganese-steel castings.
Forge-welded steel pipe.
Riveted steel and wrought-iron pipe.

The committee on Iron-Chromium, Iron-Chromium-Nickel and Related Alloys, whose activities are concerned with those ferro-alloys that are known for their resistance to corrosion and high temperatures, recommended revisions in the chromium-nickel sheet, plate and strip specifications that were considered necessary to bring them into agreement with current practice and with the type composition adopted by the American Iron & Steel Institute. The committee also described the emergency alternate provisions that were incorporated in three specifications for stainless steel plate, issued in May, 1941, and announced the completion of tables of data on chromium and chromium-nickel steels, which are to be published soon.

Reporting during a session devoted to iron, the Committee on Cast Iron presented revisions in the standard specifications for gray iron castings for valves, flanges and pipe fittings to bring them into agreement with the general specifications for gray iron castings. In addition, the committee recommended the withdrawal of two obsolete specifications, one covering cast-iron locomotive cylinders and the other, chilled-tread cast-iron wheels.

Malleable Iron

Also presented during the session on iron was the report of the committee on Malleable Iron Castings, which proposed new tentative specifications for malleable iron castings for flanges, pipe fittings and valve parts; however, consideration of these specifications was deferred to a later date pending further study. This committee also recorded approval of the existing standard specifications for malleable iron castings and their submission for approval as American standard by the American Standards Association. Another report presented during the same session was that of the Committee on Wrought Iron, which recommended the adoption as standard of the tentative specifications for single and double-refined wrought iron bars, and reaffirmed without change four existing standard specifications.

The completion of emergency specifications for lead coatings on iron and steel hardware, with a view to the conservation of zinc, was reported by the Committee on the Corrosion of Iron and Steel. Also, this committee presented an important revision in the present tentative specifications for zinc coatings on hardware and fastenings, reported on the results of the exposure tests of copper-bearing and non-copper-bearing black corrugated plates that it has in progress, and presented extensive tabulated data on the results of the atmospheric corrosion tests of metallic-coated hardware, structural shapes, tubular goods, etc., that have been in progress at five locations since 1928.

Among the committee reports of interest to the railways that were presented during a session on non-ferrous metals was that of the Committee on Copper and Copper-Alloy Wires for Electrical Conductors, which recommended for publication as tentative the specifications for lead-coated and lead-alloy-coated wire that were accepted by the society as an emergency standard in April of this year. In addition, the report presented revisions in the tentative specifications for rope-lay-stranded and bunch-stranded copper cables for electrical conductors, and included new tentative specifications for tinned hard-drawn and medium hard-drawn copper wire.

Concrete and Concrete Aggregates

Several of the sessions at the convention were set aside for the consideration of concrete and concrete aggregates, cement and related products. A number of recommendations of interest to all large users of concrete were made in an extensive report by the Committee on Concrete and Concrete Aggregates. Presented in this report were new tentative specifications for waterproof paper for curing concrete and for methods of sampling fresh concrete; standards for measuring the length of drilled concrete cores; and a test for the air content of freshly-mixed concrete. A number of new definitions were also presented and a revision was recommended in the standard specifications for concrete aggregates. Also, a revision was recommended in the tentative specifications for ready-mixed concrete (C94-41T) and the standard specifications (C94-38) were withdrawn. Amendments in three standards and revisions in two tentative standards were also recommended.

An interesting feature of the session on concrete and concrete aggregates was a paper dealing with the use of powdered aluminum as an admixture to concrete. It was explained that, when extremely small amounts of aluminum are used, the principal effect is to create a certain amount of internal expansion of the cement paste during hardening, and to remove the usual "water gain" under reinforcing bars and particles of the aggregates. As the net result, certain properties, especially the bond between the concrete and the reinforcing steel, are improved. Moreover, it was said that when the amount of aluminum powder used is such as to reduce the weight of the concrete several per cent, the resistance to the effects of alternate freezing and thawing is increased considerably, without a serious decrease in strength.

Among other interesting papers presented during a session on concrete and concrete aggregates was one dealing with the influence of the durability of aggregates upon that of the resulting concrete. In this paper, data were presented to show that the soundness test of the aggregate is not a dependable criterion of the durability of the resulting concrete.

Among the committees whose work has been strongly influenced by the emergency is that on cement. Of the two meetings held by this committee during the year, one was given over entirely to a discussion of questions

affecting cement that had arisen as a result of the emergency. In this connection, the War Production Board had requested the society to submit recommendations for limiting the types of cement to be produced and any other modifications in specifications that would contribute to the increased production and conservation of cement. As a result, the committee developed a set of emergency alternate specifications for portland cement, which were approved on June 6. After reviewing the developments leading to the promulgation of these emergency specifications, the report of the committee turned to a discussion of its routine activities, and included a number of recommendations regarding several standards. The report of this committee was presented at a session devoted to cementitious materials, during which a number of interesting papers were presented, including one on the theory and measurement of the plasticity and workability of mortars, another on the curing of masonary mortars, and a third on the effect of brick absorption characteristics upon mortar properties.

In view of the increasing recognition that is being given by the railways to the importance of thermal insulation in buildings, the report of the Committee on Thermal Insulating Materials was of particular interest to railway men. This report discussed the consideration that is being given by the committee to the preparation of emergency specifications for pre-formed block-type thermal insulating materials, thermal insulating cements of all kinds, blanket-type flexible and loose-filled thermal insulating materials, and structural insulating boards.

Waterproofing and Roofing Materials

Among other features of the convention that were of special interest to the railways was the report of the Committee on Bituminous Waterproofing and Roofing Materials. This report pointed out that the committee had recommended that steps be taken to waive the provisions requiring the use of nails with protective coatings for roofings, covered by the tentative specifications for asphalt roofing surfaced with coarse mineral granules, and in the tentative specifications for asphalt roofing surfaced with powdered talc or mica. Also, the committee made recommendations affecting the following specifications:

New Tentative Standards

Coal-tar pitch for steep built-up roofs.

Asphalt-saturated and coated asbestos felt for use in constructing built-up roofs.

Revision of Tentative Standard

Asphalt for damp-proofing and waterproofing.

Revision of Standard, Immediate Action

Coal-tar saturated roofing felt for use in waterproofing and in constructing built-up roofs.

Adoption of Tentative Standards as Standard

Asphalt-saturated roofing felt for use in waterproofing and in constructing built-up roofs.

Woven cotton fabrics saturated with bituminous substances for use in waterproofing.

Methods of testing films deposited from bituminous emulsions.

Revision and Reversion to Tentative of Standard

Asphalt-saturated asbestos felt for use in constructing built-up roofs.

Withdrawal of Tentative Standard

Asphalt roofing surfaced with fine mineral granules.

Still other papers or reports presented at the convention, of direct or indirect interest to the railroads, covered such subjects as water, timber, fuels, lubricants and electrical insulating materials. For instance, the report of the Committee on Waters for Industrial Uses discussed briefly the consideration that had been given by the committee during the year to the sampling, methods of analysis and classification of industrial waters. In addition, it recommended for adoption as standard three tentative methods comprising the test procedures for determining calcium ion, chloride ion and sulfate ion in industrial waters. Another feature was the report of the Joint Research Committee on Boiler Feedwater Studies, which consisted primarily of a discussion of research on caustic embrittlement.

Regarding the subject of timber, a feature of interest to the railways was the report of the Committee on Timber, which presented for immediate adoption a revision in the standard method of test for the distillation of creosote, providing for the use of an electric heater and means for controlling its operation. This recommendation was made for the purpose of bringing the method into agreement with the present standard of the American Wood Preserver's Association.

Safety Medalists Hear Crossing Caution Plea

THE railroad winners of the E. H. Harriman Memorial Medals (for 1941 safety performance) received their awards on June 25 at a luncheon tendered by the American Museum of Safety at the Yale Club, New York. Recipient of the gold medal (larger roads) was the Eastern District of the Union Pacific. The silver medal (roads of intermediate locomotive-mileage) went to the Duluth, Missabe & Iron Range. The winner of the bronze medal (smaller carriers) was the Monongahela.

In the gold medal class, the New York Central received a certificate of honorable mention. The Pullman Company was given a special certificate of commendation. In the silver medal group, honorable mention went to the Colorado & Southern and the Western Maryland.

The guest speaker of the occasion was D. B. Robertson, president of the Brotherhood of Locomotive Firemen and Enginemen. Presiding at the luncheon was Dr. Donald B. Armstrong, president of the Museum of Safety. The awards were presented by Judge Robert V. Fletcher, vice-president and general counsel of the Association of American Railroads. He called upon Roland Harriman (who, with his mother and his brother are the donors of the medals) to present the gold medal to President Jeffers of the Union Pacific. Similarly, the silver medal was presented to President Carlson of the D. M. & I. R. by C. S. Belsterling, vice-president of the United States Steel Corporation. Champ Carry, executive vice-president of the Pullman Company, received the certificate in his company's behalf. R. E. Dougherty, vice-president of the New York Central, was the recipient of the certificate of honorable mention bestowed upon his company. The C. & S. certificate went to Robert Rice, vice-president; of the Western Maryland to J. R. Tenney, superintendent of safety; and of the Monongahela to J. W. Boyd, superintendent.

Mr. Robertson, in his address, emphasized the injury

done to the war effort by railroad accidents. Citing over-all accident figures for 1941 as having shown an increase over 1940, he called for a vigorous campaign to reduce these casualties—as a necessary step in the conservation of man-power and materials for the winning of the war. He reviewed in some detail the accomplishments of the railroads in the direction of safety since the last war, citing not only their educational campaigns but that "much of the ten billion dollars spent by the railroads in the last twenty years gave the men efficient tools to win the war against accidents." The result was a decline of 75 per cent in employee deaths per 10,000 from 1904-9 to 1934-9. He mentioned casualties to trespassers, and urged that the carriers be prepared to cope with increased trespassing, should heavy unemployment again occur.

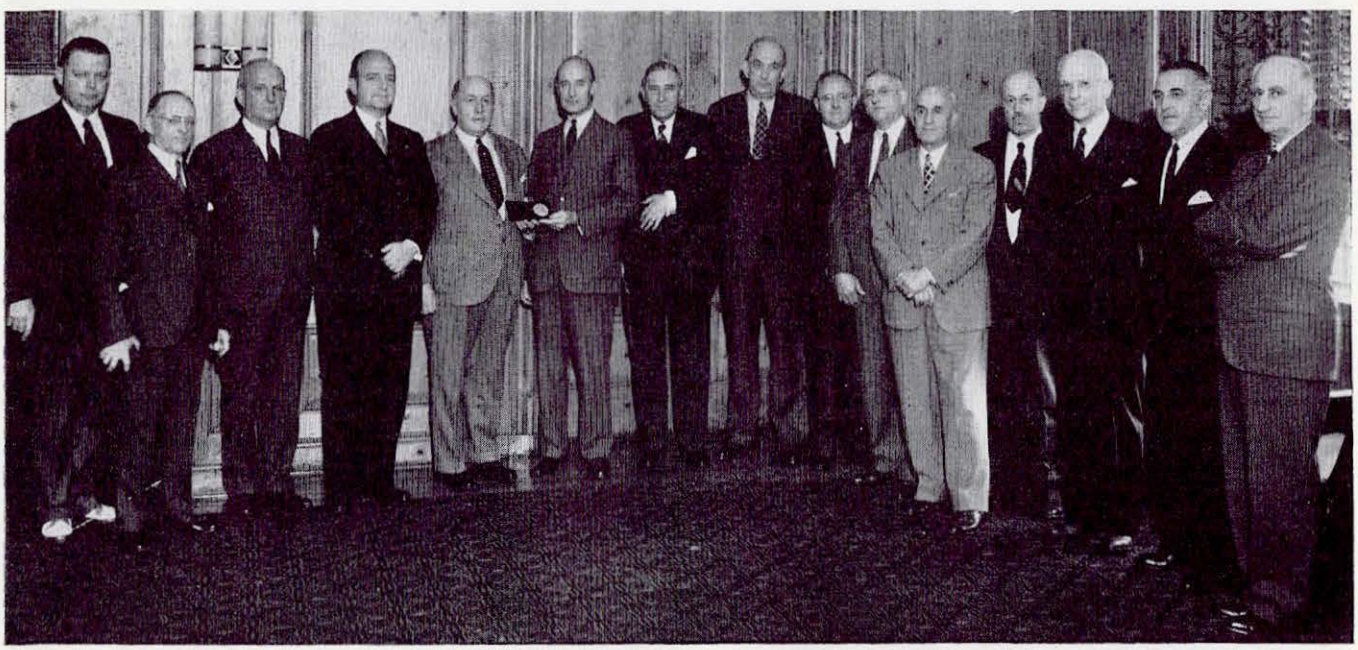
Mr. Robertson's principal emphasis, however, was placed upon grade crossing accidents—and the threat that lies in them to the nation's war effort. One notable instance he reported to evidence the validity of his view is summarized in the editorial pages herein. In 1941, he reminded his audience, grade crossing fatalities were the highest since 1930; and, in the first quarter of 1942, there was a 7 per cent increase in deaths and a 15 per cent increase in injuries, over the same period last year. He told of an oil truck hit at a crossing, and its lading sprayed the length of a train, thereby augmenting the hazard. He said efforts have been made to lay this situation before the President and Director Eastman. He hopes that a Presidential proclamation may be forthcoming to arouse public sentiment to prevent these accidents in order "to protect the armed forces and conserve the materials of war which are moving in such abundance over the rail arteries of the country."

In closing, Mr. Robertson paid a tribute to the winners of the awards for their safety records; and he especially commended President Jeffers of the Union Pacific for calling in the general chairmen of the engine service organizations to "collaborate with him and his technical organization in the design and building of new locomotives in order to secure the most practical ideas in the interest of safety in operation." In responding to this, Mr. Jeffers spoke highly of the advice he receives from "the fellow down the line," and he characterized Mr. Robertson as typical of the "bright, intelligent and fair" men who head the railroad organizations.

Judge Fletcher, agreeing with Mr. Robertson on the gravity of the crossing accident situation, said he did not look for a remedy in "penalizing legislation." "As I view the matter," he went on to say, "the only remedy lies in a program of propaganda, which will not only enlighten the public as to the danger, but also appeal to the patriotic and humane instincts of our people."

President Williamson of the New York Central, in a prepared statement which his absence prevented him from presenting in person, drew attention to the saving of 1,115 lives of employees on that system alone in the 18 years 1924-41, by the improved safety performance in those years over the year 1923. Mr. Dougherty commented upon the progress made, especially in New York State, in the acceptance by the political authorities of the major responsibility for the cost in grade crossing elimination; and he praised the railway labor organizations for the part they had played in gaining recognition of this point of view. A congratulatory telegram from "back home" was read to President Carlson of the D. M. & I. R.—the sender being Governor Stassen of Minnesota. Mr. Carry, in receiving the certificate for the Pullman Company, accorded the railroads which operate Pullman cars, and the designers and builders, a major share of the credit for his company's favorable performance.

The committee of award has Judge Fletcher as chairman. Other members are J. M. Davis, chairman of the Lackawanna; B. F. Fairless, president of U. S. Steel; Former I. C. C. Commissioner McManamy; Conservation Engineer Lew R. Palmer of the Equitable Life Assurance Society; and Samuel O. Dunn, chairman of the Simmons-Boardman Publishing Corp. and editor of *Railway Age*.



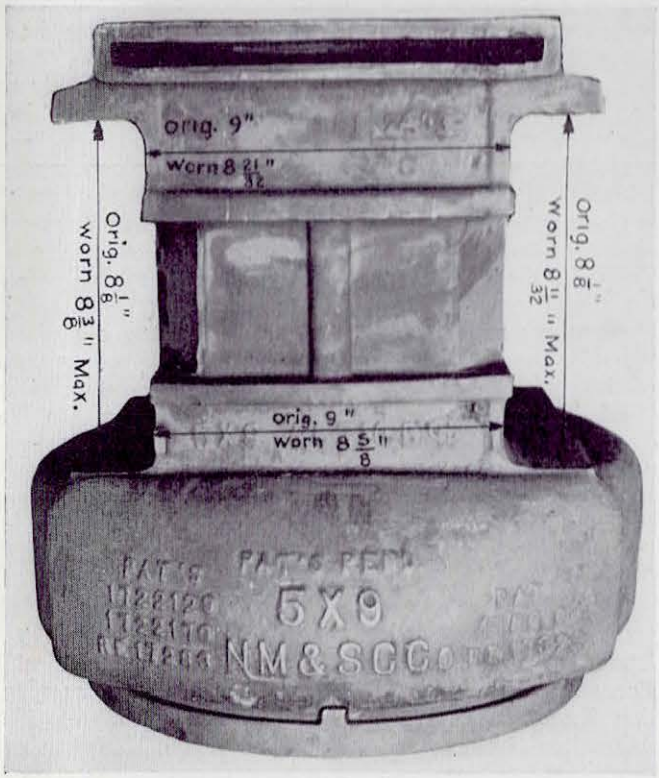
Harriman Award Donors and Winners

Left to Right: Safety Supt. Rohweder (D. M. & I. R.); President Carlson (D. M. & I. R.); Vice-President Belsterling (U. S. Steel); Executive Vice-President Carry (Pullman); President Jeffers (U. P.); E. Roland Harriman; Judge Fletcher; Vice-President Dougherty (N. Y. Central); Dr. D. B. Armstrong; General Safety Agent Hill (N. Y. Central); Vice-President Rice (C. & S.); Safety Supt. Tenney (W. M.); Supt. Boyd (Monongahela); Col. John Stilwell; Lew Palmer.

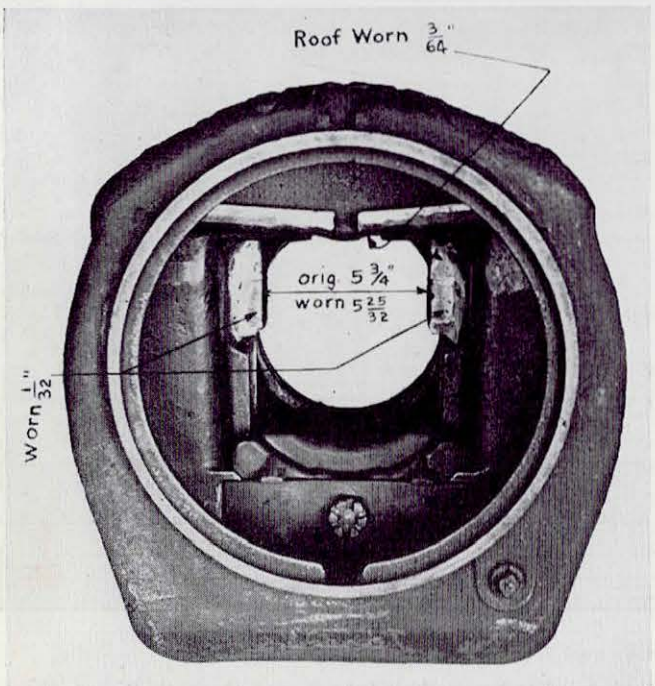
Long-Life Journal Box

THE Isothermos journal box manufactured by the National Malleable and Steel Castings Company, Cleveland, Ohio,* has established a service life of one million miles under a baggage car operated in high-speed service. During this period of service a journal bearing life of over 350,000 miles per bearing was obtained and when the boxes were removed they themselves were checked and measured for wear. Fig. 1 is an exterior view of one of the boxes removed showing the original dimensions and the extent of wear. Fig. 2 shows wear on the interior of the box.

* For a description of this box and other performance records see the *Railway Age*, April 26, 1941, page 723.



Condition of Exterior of Isothermos Self-Lubricating Journal Box After a Million Miles in Service



Interior Wear on an Isothermos Journal Box after a Million Miles of Service

Films Get Try-Out As Public Relations Medium

GROWING public demand for showings of motion pictures portraying the inner workings of the railroads appear to attest to the power of the cinema as a public relations device. One such picture—"Railroadin'," produced for the General Electric Company and the American Locomotive Company—is currently being seen by around 70,000 people each month, on the average, and increasing calls for displays of it forecast a prolonged useful life.

This film has no immediate publicity objective. Rather, it aims to tell forthrightly, in action, sound and color what the ralroads are, how they developed and what they do. In the telling, it is suggested what the railroads have contributed to the growth of the nation, and what they contribute now to personal comfort, industrial efficiency and wartime achievement. There is no "sales talk," no mention of the products of the companies that produced the film nor of the individual railroads whose facilities are portrayed therein.

A short account of the preparation of this film, and a list of General Electric film libraries where it may be borrowed, appeared in *Railway Age* of October 11, 1941, page 592, at the time when it was first released. Since then many railroads have sponsored showings before clubs, schools, and organizations of every type, and it is reported that the copies available on loan have been steadily engaged. A number of railroads, among them the Denver & Rio Grande Western, the Norfolk & Western, the Erie and the Pennsylvania, have bought outright one or more copies of the film in order to put it to more intensive use in their territories than the loan arrangement permits. In this way the Western Region of the Pennsylvania alone was able to reach an average of 20,700 people per month during the first four months of this year.

The use of motion pictures by railroads for advertising purposes is, of course, not new, particularly in the field of passenger traffic promotion. Films have also been used for public and employee relations purposes—a notable recent example being the New Haven's "A Great Railroad at Work," picturing the varied activities that lie back of smooth railroad operation.

The New Haven has exhibited this picture first to its own men and their families, both because it wants them to know more about the contribution of each worker to the common purpose of running the railroad, and because their interest in the picture should be contagious and spread through them to the area the road serves. Then the film travels up and down the line to carry its message to civic organizations, schools, clubs, and the public in general. With this program, the railroad is advertising—not so much its specific trains or its territory—but itself as a vital and nationally-essential institution. It is believed by many that therein lies the principal message for which railroad interest now most urgently requires a popular audience.

"To Keep 'Em Flying . . .

We Must Keep 'Em Rolling"

The Challenge and Opportunity of the Present Crisis to All Who Can Help Increase Railroad Efficiency

★

Efficiency FOR VICTORY

Railroad men are now virtually part of the nation's armed forces.

War expenditures this year are taking about one-fourth of national production and income. But government freight and passengers move much longer distances than commercial traffic. Hence, the one-fourth of the nation's production and income being devoted this year to war may be requiring one-half of the railway service being rendered. And the proportion of railway service devoted to war will increase indefinitely.

Thus one-half of the railroad plant — yards, tracks, cars, locomotives, signals — is already as much a part of Uncle Sam's war machine as are guns, tanks, bombers. One-half of each railroad man's time is devoted to the Army, the Navy and the Air Force as truly as if he wore a uniform.

This is a railroad war — depending far more upon efficient railroad service than any previous war.

United States Senator Schwartz of Wyoming coined a fine railroad slogan in a recent letter to the *Railway Age* when he said: "To 'Keep 'em Flying,' we must 'Keep 'em Rolling.' " Airplanes, trucks, ships are more involved in actual combat than railroads — and so it is pictures of them, rather than of trains, which receive most attention in the illustrated newspapers and magazines. But planes, trucks, ships (as one of our railroads recently emphasized in an advertisement) have to "start their trips by train" — in the form of coal and iron from the mines, then through every step in fabrication, and as finished products to tidewater.

Mechanized warfare requires maximum production by heavy industry; and heavy industry can be served adequately only by railroads. Germany, as newspaper correspondents just returned are disclosing, has learned belatedly that spectacular superhighways make good pictures, but that a nation to function effectively in modern war must have efficient railways. And the Nazis are trying feverishly to restore the depleted equipment and efficiency of the German Reichsbahn, which they neglected while building up air lines and "autobahnen."

Railroad performance is largely determined by the ingenuity and effort of railroad men.

As vital and integral a part of the war effort as they are, our railroads are not the object of official government attention to the same extent as other parts of it. This is because, as yet, no scarcity of railroad transportation has been felt; while planes, ships, tanks, guns, soldiers are needed immediately in much greater quantity in

the worldwide zones of action where the enemy is. The fact that railroad shortages have not developed has deprived the carriers of the "fostering guardianship" of government procurement officials. The railroads may take pride in their lack of shortcomings thus far.

The railways do, of course, have the welcome and understanding co-operation of the transportation branches of the armed forces. They are aided in innumerable ways by Director Eastman of the Office of Defense Transportation and his associates, and by the shippers — best-informed and most collaborative customers any industry ever had. Other branches of the government accord as much consideration to railway requirements as they believe necessary preoccupation with more critical situations will allow. But great surges of popular fervor, which animate the construction of planes and tanks, and help to conserve rubber, gasoline and other scarce metals, are not aroused to increase railroad efficiency and performance.

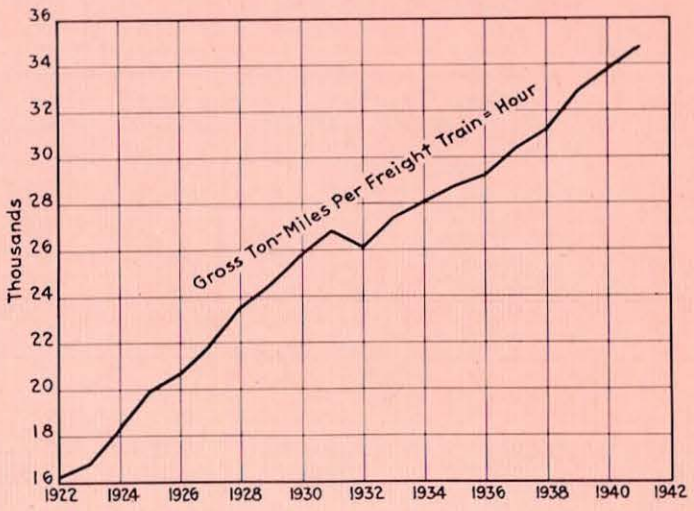
The great task of the railroads has to be done principally with steam generated within the industry itself. It is the high duty and opportunity of railroad men, from track walkers to chief executives, to generate that necessary steam and use its energy with the utmost skill in providing transportation for victory. Early victory!

A depleted plant and working force—but unprecedented railroad service.

In March (the latest month for which figures are available at this writing) the railroads already were handling 34 per cent more ton-miles of freight and 25 per cent more passenger-miles than in the same month of the boom year 1929. And they did the job with 24 per cent fewer employees, 24 per cent fewer freight cars, and approximately one-third fewer locomotives and passenger cars.

An astounding record — but no miracle. A record built with foundations in the past. The present generation of railroad men started with the degree of efficiency already attained by their predecessors. Every day, every week, railroad men and manufacturers of materials had hit upon means of doing railroad jobs a little better or with less lost motion. News of these improvements had been spread about by word of mouth, or through the medium of the industry's press; and the improvements begun by individuals had steadily augmented the efficiency of the entire industry.

That is the formula. Nothing so marvelous about it — except the results over periods of time. It works in peace as well as war. Take one well-known yardstick — gross ton-miles per freight train-hour:



See how it has trended constantly upward, even in years of untoward conditions, with but brief and inconsequential set-backs.

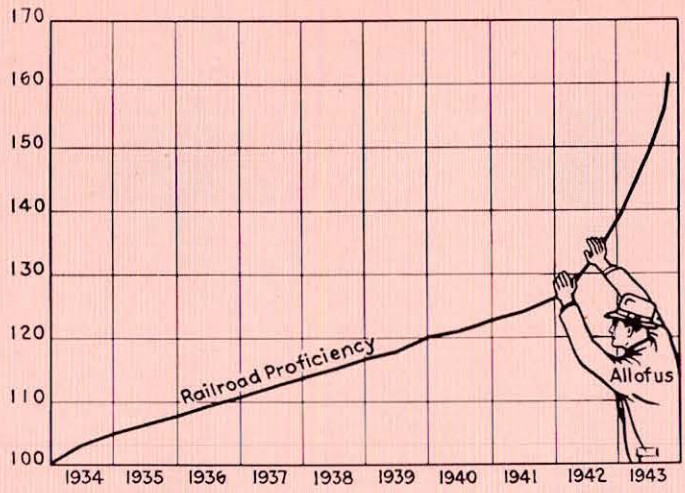
The railroads are not a new industry. Therefore efficiency on them is not increased startlingly by one or a few brilliant ideas or

inventions. It is caused by thousands of relatively slight improvements introduced steadily by thousands of thoughtful men, in the service both of the railways and of railway manufacturers.

Applying the efficiency-improvement formula to the present job.

This is the time-tested formula for securing increased railway efficiency. The need for increased efficiency will be more critical in the months just ahead than in all past railroad history. Will the old formula deliver the necessary results?

It will — upon one condition. This is, that working of the old formula be accelerated. What we need to do is something like this:



The formula has two parts. One is the discovery of new and better ways of doing transportation work. The other is getting word around about these new and better ways. There is required —

1 — Utmost encouragement to active minds in the industry to evolve more efficient methods faster.

2 — Surer and speedier means than ever before of spreading the word about these more efficient methods throughout the industry.

One of the usual important factors of improved performance (plenty of materials, and ample manufacturing capacity for more efficient devices) is temporarily absent. Ingenuity, and publicity of results, must consequently concentrate largely now on method — ingenuity and publicity by both railroad men and manufacturers in getting old things done in new ways, many new things done, and publicizing them so that every phase of railroad maintenance and operation will be benefited and accelerated.

Many railroads have "suggestion plans," the operation of which can be intensified. Whether with or without formal plans of this kind, management can indicate to supervisors and employees that new ideas and methods are needed and welcome, and stimulate emulation in developing them.

Giving widespread and prompt publicity to improved methods — in the shop, the yard, the freighthouse, on the track — is the stone that kills two birds. For it not only gets the word around to others, so that they may adopt *your* improved methods more quickly than otherwise, but stimulates them to develop methods by which *you* may benefit. There can be no surer way of getting those with ingenious and inventive minds to acting on their ideas than that of getting the whole industry to talking of increased efficiency to help win the war.

"Efficiency for Victory"

The *Railway Age* and its sister publications (Railway Mechanical Engineer, Railway Engineering and Maintenance, Railway Electrical

Efficiency FOR VICTORY

Engineer and Railway Signaling) have long been a principal means of informing the whole railroad industry of contributions toward efficiency and economy, wherever and however made. Now, for the duration, the effort of these publications will be concentrated on collecting and disseminating, in both their editorial and advertising pages, news of facilities and methods, wherever adopted, for producing more ton-miles and passenger-miles with the limited equipment, materials and labor force that will be available.

Our transportation editor will report currently from the "firing line" the innumerable things being done to increase the utilization and productivity of present plant . . . Our mechanical editors will recount the latest and best expedients adopted to put and keep the available supplies of locomotives and cars in the best practicable condition for the most efficient utilization . . . Our engineering and signaling editors will record the means being used to put and keep all permanent structures in condition to permit the most efficient utilization of equipment . . . Similar innovations and improvements in methods will be reported from all other railroad departments, including, of course, performance of the vital purchases and stores function, with accent on reclamation, conservation, substitution . . . Manufacturers of equipment and supplies will, in our advertising pages, contribute, as never before, information directed to helping the railroads to increase the service and prolong the life of the limited facilities that will be available, and to finding substitutes for materials heretofore used which have become largely or wholly unavailable.

In order that our railway papers may perform their part of the great task ahead as thoroughly and promptly as possible, we shall need the help of our readers. When something is done on your railroad that other railroads could do for the benefit of all, let us know about it. Our editorial staff is working intently to discover and report all important new developments as rapidly as possible — but obviously, the active collaboration of our thousands of railroad readers will enable us to do a more prompt and more effective job.

Efficiency FOR VICTORY

After the War.

What traffic conditions peace may bring to the railroads nobody knows — but it can be predicted with assurance that, the more efficiency they attain during the war, the stronger they will be for meeting conditions after the war, whatever these may be.

Such a time of stress has its compensations. It demands full development and utilization of ability — and in such a time ingenious, energetic, devoted men disclose their latent resources to themselves and their superiors. It is every railroad man's present duty to contribute his utmost to "efficiency for victory"; and also his opportunity to so demonstrate his capabilities, when they cannot fail to be recognized and appreciated, as to assure that they will be rewarded by advancement. Duty and opportunity thus go hand in hand.

It is the hope of the railway publications of the Simmons-Boardman Publishing Corporation that they may efficiently serve all those pursuing the joint objectives of "Efficiency" and "Victory," the full and speedy attainment of which is so essential to our railroads and our country. And in furtherance of this objective we shall welcome all the information, ideas and suggestions from men in the railway field and the railway equipment and supply manufacturing field, the dissemination of which by these publications may be constructive "for the duration" and afterward.

RAILWAY AGE
RAILWAY MECHANICAL ENGINEER
RAILWAY ENGINEERING AND MAINTENANCE
RAILWAY SIGNALING
RAILWAY ELECTRICAL ENGINEER

Transport Board Holds Hearings

Sessions called in connection with inquiry into what carriers get how much in subsidies

WASHINGTON, D. C.

REPRESENTATIVES of the various types of transportation and others claiming an interest in "public aids" to carriers got their opportunity this week to shoot at the tentative exhibits on that subject which had been prepared by the staff of the Board of Investigation and Research created by the Transportation Act of 1940. The opportunity came at the Washington, D. C., hearings in connection with the Board's public-aids study, which got under way on June 29 and continued throughout the week.

Railroad organizations which entered appearances included the Association of American Railroads, the Western Association of Railway Executives, the Railway Labor Executives' Association, and the Brotherhood of Railroad Trainmen. The A. A. R. presentation included testimony by Dr. C. S. Duncan, economist for the Association; and by C. B. Breed, C. Older and W. S. Downs who made the so-called "railroad report" on public aids to highway carriers.

No Issues To Be Decided Yet

The tentative exhibits of the Board's staff had been distributed prior to the hearings; and they were reviewed in the *Railway Age* of June 20, page 1184, and in the issue of June 27, page 1239. As explained by Board Chairman Nelson Lee Smith, the hearing was "a step in a continuing effort to develop factual material and to formulate sound conclusions on the questions of public aids to carriers." In other words, the Board desired "to permit those interested to examine critically the factual data thus far available . . . and to offer corrections and additional data which, in their opinion, should receive consideration in this investigation." No issues are to be decided by the Board "solely on the record made at this hearing," Mr. Smith also said.

"Among the matters to be considered in this investigation, and therefore pertinent to these hearings," he went on, "are: First, what can be regarded as public aids to transportation—including payments of funds, grants of land, extensions of credit, purchases of securities, and the like; second, what standards of measurement should be applied in determining the extent of such public aids; third, what are the fairest and most appropriate methods of allocating such public aids among various carriers and users of transportation facilities; and, fourth, what compensation have such carriers and users of transportation facilities given the public in return for aids received."

Sitting with Chairman Smith were the other two members of the Board—Robert E. Webb and C. E. Childe, while the Board's presentation was directed by its general counsel—Talcott M. Banks, Jr. Its witness was Dr. Burton N. Behling, director of the public aids study.

In his direct testimony, Dr. Behling explained the previously-distributed exhibits and introduced a new one classifying waterways by federal costs per traffic unit for the year 1940. Also, he submitted certain corrections to the exhibits. Among the data corrected were some of the highway figures which the article in the *Railway Age* of June 20, pages 1184 and 1185, had taken from the tables originally released. The corrected figures show the grand total spent on all highways, roads, and streets during the 1921-1940 period as $39,587,692,000. Of this amount, $22,073,505,000 was for construction, $14,004,563,000, for maintenance and $3,509,624,000 for interest paid. State and local agencies are shown to have spent $35,554,555,000 of the total, and the federal government $4,033,137,000. Another correction changes from $2,159,708,000 to $2,107,365,000 the Board's figure for total 1937 expenditures on all highways, roads and streets, as used in the exhibit showing comparisons with former Coordinator Eastman's report on Public Aids to Transportation and the Breed-Older-Downs report.

Cross-examination of Dr. Behling by J. Ninian Beall, counsel for American Trucking Associations, Inc., brought out the fact that the exhibits do not undertake to set up any compensation the carriers might have given for the public aids. Neither do they contain any data on donations private interests may have made to carriers. Mr. Beall objected to the inclusion of amortization and depreciation charges for such highway items as grading. He suggested that retirement accounting might well be applied to the highway system, just as it has been used by railroads in the past. The A. T. A. attorney also got Dr. Behling to admit that city streets "in a sense" comprise a terminal for land transportation just as a harbor does for water transportation. He then went on to ask if the cost of city streets shouldn't be allocated to the different types of carriers on the basis of the use which each carrier's terminal services make of such streets. Dr. Behling conceded that such a proposition might "be sensible."

L. F. Orr, central vice-president of the National Council of Private Motor Truck Owners, called attention to the "wide variations" in the total annual expenditures on highways and streets as reported in the Board exhibits and in the co-ordinator and the Breed-Older-Downs reports. Citing one year in which the difference was a half-billion dollars, Mr. Orr called that a "tidy sum," adding that if the co-ordinator and railroad reports had made such a mistake he'd like to have more detailed data. Later Dr. Behling returned to explain that the differences were accounted for by such factors as the use by the Board of data not available to the other investigators, and the inclusion of federal work relief expenditures on highways at 100 per cent whereas the co-ordinator took them in at 75 per cent.

Defaulted R. F. C. Loans Not Yet Lost

J. Carter Fort, general counsel of the A. A. R., directed the witness' attention to statements in the railroad exhibits, suggesting that it would be reasonable to assume that the Reconstruction Finance Corporation would probably lose the $137,328,165 in principal and $29,-

627,955.19 in interest on railroad loans which were in default as of April 30. In that connection Dr. Behling agreed that the loans were secured by collateral and that the R. F. C. was a party to reorganizations of railroads which are in debt to it. He also agreed that the inquiry into the loans would be incomplete until there was a follow-through to a valuation of the collateral held by the R. F. C. and an appraisal of how the R. F. C. was faring in reorganization proceedings.

With respect to the data on waterways, Mr. Fort brought out the fact that the exhibits included several channels on which no federal money has even been spent. While the traffic handled on such channels enters the calculation of the over-all average federal cost per ton, Dr. Behling said again, as he had in comment accompanying the waterway exhibits, that he does not regard this average (18.6 cents per ton) as significant.

Parker McCollester, counsel for American Hawaiian Steamship Company and Luckenbach Steamship Company, drew from the witness agreement with his suggestion that the Board would have to consider who uses the waterways when it comes to determining who gets the subsidy. Mr. McCollester explained that he had in mind a situation like that in New York harbor where marine operations of the railroads are substantial. Stuart B. Bradley, counsel for certain inland waterways carriers, was concerned about the use of an interest item in connection with aids to navigation. He thought this was unwarranted when much of the money spent had been raised by taxes.

The foregoing cross-examination of Dr. Behling was interrupted at two points for brief presentations made by Douglas Sutherland, executive secretary of the Civic Federation, Chicago; and by Fred Brenckman, Washington representative of the National Grange. The former discussed street and highway financing problems of Chicago, arguing generally that there must be a reduction in the proportion of highway costs borne by property. Mr. Brenckman expressed his belief that highway users are now paying more than their fair share of highway costs, and complained about the "diversion" of motor vehicle taxes to non-highway uses.

G. Donald Kennedy, president of the American Association of State Highway Officials, called for a fiscal policy which would recognize traffic utilization as a guiding principle of revenue distribution. In his opinion "a complete review of the physical needs of the nation's highway systems and of the accompanying highway finance policy is a major post-war requirement." Mr. Kennedy cited data which he interpreted as showing that 40 to 50 per cent of the cost of highways can be user charges, while "public aids and general revenues must comprise the balance of total costs which reflect the broader social reconstruction necessities."

A. T. A. Presentation

American Trucking Associations' presentation was made by A. T. A. General Manager John V. Lawrence, who read a lengthy prepared statement and submitted a series of exhibits. Opening with comment on the exhibits prepared by the Board's staff, Mr. Lawrence complained about their manner of handling highway depreciation and amortization, and then went into a discussion of the "cities as terminals" idea which had been thrown out by A. T. A. Attorney Beall in his cross-examination of Dr. Behling. "The use of city streets as a terminal facility by railroads," Mr. Lawrence said, "is far greater than that made by motor carriers because of the greater volume of tonnage handled by railroads which must be supplemented by transportation within the terminal districts."

Continuing, Mr. Lawrence suggested that the Board's exhibits were infirm in that they did not lend themselves to a breakdown of costs or charges between intrastate and interstate traffic. Also he contended that the public utility concept should not be followed in connection with studies or allocations of highway costs. Meanwhile Mr. Lawrence did assume that the highway user "may be expected to pay a fair charge for the divided and restricted use which he is permitted to make of the highways"; but "the restrictions which are placed against for-hire trucks clearly subordinate their use of the highways, to the convenience of all other users of the highways, both public and private." And the witness hoped to establish the proposition "that the *for hire* trucks *enjoy* so many limitations, restrictions and costs, that the percentage of highway investments which may properly be charged to them borders on the nominal, and that their present payments are *extremely excessive.*"

In the calculation of highway costs, the A. T. A. general manager opposed inclusion of any item representing "hypothetical or fictitious taxes" or interest. He criticized the Breed-Older-Downs report as being "of such biased and unsound nature as to merit little serious consideration"; and while he did not accept the co-ordinator's report in its entirety, he was satisfied with its finding that "highway users had more than paid their share of costs allocated to them by an amount of over one-half billion dollars in the period 1921 to 1937 inclusive, with the excess occurring mainly in the latter years of the period."

Would Wipe Out Past Road Costs

"This being so," as Mr. Lawrence put it, "we submit that this Board should wipe the slate clean for the past. From this point on, there should be compared special revenues received from highway users with a fair share of the actual annual expenditures which can be properly charged to the highway user, this fair share to be determined after a full allocation of costs against the general fund for benefits accruing to the general public, such as the service rendered by highways in connection with access to property (both rural and urban), fire protection, public health, education, recreation, police protection, postal service, and national defense."

Among Mr. Lawrence's exhibits were those which undertook to show what he called the "reserved capacity" of the highways in the various states, i. e., they undertook to show that highway transportation is restricted by state regulations of sizes and weights. What Mr. Lawrence called the "typical straight truck" would be a 24,000 lb. vehicle with two axles, the front carrying a load of 6,000 lb. and the rear a load of 18,000 lb. This was based on the weight restrictions recommended in the formula developed by Thomas H. MacDonald, Public Roads administrator. The exhibit purported to show that any state which did not permit weight limits in accordance with this formula was restricting highway transportation. For example, Kentucky with its 18,000-lb. limit was shown to be permitting only a 75 per cent use of its highways. By the same method other "typical" vehicles were built up until there emerged in one exhibit a "typical tractor semi-trailer and full trailer weighing a total of 132,000 lb. on eight axles. Thirty-one states were withholding 100 per cent use of their highways from that vehicle; but Arizona was withholding nothing, while Indiana, Michigan, Ohio and West Virginia were giving it 100 per cent and then some, their weight

limits (with axle distribution requirements) being 162,800 lb.

Frank Mulholland, counsel for the Railway Labor Executives' Association, suggested that Mr. Lawrence should not have stopped at 132,000 lb. when he could have put on another trailer or two to build a still bigger "typical vehicle." Mr. Lawrence explained that it was not his purpose to carry the idea beyond weight limits which were not permitted in any state. The "vehicles" shown in Mr. Lawrence's exhibit were characterized by Mr. Fort as "fictitious, theoretical, representative, typical trucks;" and the A. A. R. general counsel later brought out in his cross-examination of Vice-President Orr of the National Council of Private Motor Truck Owners that of the 4,715,000 trucks registered in 1941 only 354,000 were of two tons' or more capacity.

Says Private Trucks Pay More Than Share

In his direct presentation Mr. Orr asserted that as a whole the private truck owner was paying "a great deal more" than his share of highway costs. It is the position of his organization, he said, that the question of highway use and cost has already been exhaustively studied by such "impartial groups" as the National Transportation Committee (the so-called Coolidge Committee), and the Federal Co-ordinator of Transportation. The Council thus thinks that the Board should bring those studies up to date, without change as to principle or otherwise "unless error is found."

Commenting on the exhibits prepared by the Board's staff, Mr. Orr noted that in some tables a majority of the figures were estimates. He suggested that the Board needs more definite data than that before it recommends any change in highway taxation. The witness told Mr. Banks that he thinks the facts are available to replace the estimates, even though they may be difficult to get—"they're not in the source books in Washington." When he returned to the stand to submit data which had been requested at the time of his previous appearance, Dr. Behling said he shared Mr. Orr's dislike of estimates, adding that his staff had obtained the most reliable data that they knew about.

Russell E. Singer, general manager of the American Automobile Association, read a prepared statement expressing the A.A.A. view that "it would be unwise at this time to attempt to reach any hard and fast formula of highway taxation policy." This view is based on the thought that "no one can tell today how many vehicles will be in operation at the close of the war," nor can anyone predict "the extent to which the federal government may embark on extensive highway construction programs as a means of bolstering the post-war economy." Meanwhile Mr. Singer had asserted that "only if payments made by highway users fail by a substantial margin to meet assigned costs can there be any question of subsidy." He added that "generally speaking, studies of the problem made by independent agencies have shown that, rather than being subsidized by government, highway users have paid at least a fair share of highway costs."

Railroad Presentation

The railroad presentation got under way on July 1 with the opening statement by A. A. R. General Counsel Fort. The railroads, Mr. Fort said, were not proceeding as though nothing had happened before with respect to the matters under study. Thus he offered as exhibits two A. A. R. publications—What is Public Aid to Transportation, the analysis of the co-ordinator's report prepared by Dr. Duncan and published in 1940; and the Breed-Older-Downs report which was published in 1939. The ultimate objective of the public-aids study, as Mr. Fort saw it, is the material it will supply for the study of the relative economy and fitness of carriers. In such a set-up, he went on, there must be a determination of all costs of the various agencies of transport—not just the costs paid by users.

Next Mr. Fort assailed any attempt to justify an assignment of highway costs to communities and land because of the "consequential benefits" of highway construction. Such benefits, he said, come from railroads as well as from any enterprise of size; but indirect beneficiaries of railroad construction do not help pay for rail lines. An inquiry as to highway costs, he went on, becomes "a farce" if there is to be deducted a large sum to represent "consequential benefits" of highway construction.

Dr. Duncan, the first railroad witness, opened with his comment on the tentative exhibits which had been distributed by the Board. He criticized what he called the application of the "daily balance" test to the R. F. C. loans, i.e., the assumption that all loans and interest in default as of April 30, 1942, would probably be lost. The A. A. R. economist then addressed himself to the suggestion that the Board's staff was looking into the matter of possible aids to railroads arising from government expenditures for alteration or reconstruction of railroad bridges over waterways. He could see no aid there in view of the present law which requires railroads to bear costs of such alterations in proportion to the benefits they receive. With respect to expenditures on grade separations, Dr. Duncan also thought the railroads were bearing their share in view of the fact that benefits to railroads have grown proportionately smaller while those accruing to highway transportation have become proportionately larger.

At What Date Value Land Grants?

Coming to his comment on the Board's plans to review the co-ordinator's studies on land grants and other "historical aids to railroads," the witness made extended comments on the items included in the table headed "Summary of Public Aids Given to Railroads" which appears in Volume I on page 19 in the co-ordinator's report. The co-ordinator set up the federal and state land grants at a gross figure of $489,000,000. Dr. Duncan pointed out that this involved valuation of lands sold as of the date of sale, and of lands still in the possession of the railroads as of December 31, 1930. He added that in his opinion the granted land should be valued as of the time it was granted; and a study he had made in that connection put the total at $122,000,000. Also, Dr. Duncan thinks the amount set up by the co-ordinator for compensation received by the government in the form of reduced railroad rates is too low; it makes no allowance for the reductions made by non-land-grant roads which must equalize to get government traffic. Dr. Duncan's studies indicate that up to 1927 the government had benefited to the extent of "at least $200,000,000 in reduced rates and fares, including the mail." Also, he noted how land-grant rates have become more important because of the traffic moving in connection with the war program; they involved reductions of $4,000,000 in October, 1941.

Giving the value of other grants listed by the co-ordinator as of the date they were made, Dr. Duncan showed that the $87,000,000 item for right-of-way grants would become $1,000,000; while the $4,500,000 item for lands donated by local governments would be-

come $97,000. That item was lumped in a general $232,000,000 item covering "lands donated for right-of-way and other carrier purposes by local governments, associations, and private corporations, including apparent aids." It was Dr. Duncan's position that donations by individuals, associations, and private corporations should be eliminated from any figure purporting to show "public" aids. Also, he questioned whether there was any sound basis for assumptions made in arriving at the figure for "apparent aids." It was in commenting on this item that Dr. Duncan recalled what his teacher of statistics used to say—"Beware of the smug finality of figures."

He proceeded in like fashion to point to what he regarded as infirmities in other figures used in the coordinator's tabulation, which totaled up to a figure of $1,443,000,000 for "all aids to railroads." Dr. Duncan hoped he had shown that there is "no valid foundation" for such a sum. In any event, he pointed out, the coordinator had conceded that present railroad owners derive little if any benefit from the so-called "historical aids." Commenting on the Board's waterway exhibit, Dr. Duncan criticized the failure to include in the cost calculations an item representing the equivalent of taxes. He also objected to the inclusion in any waterway's traffic of government freight used to improve the waterway itself. The 1940 traffic figures for the Missouri river between Kansas City and the mouth, he pointed out, showed a total of 753,845 tons; but 404,262 tons or 52 per cent of the total was material for river improvement work. Likewise on the stretch between Kansas City and Sioux City, 450,413 tons or 81 per cent of the 552,523 total represented materials going into work on the river. If such traffic were eliminated the 1940 unit costs on those two stretches of the Missouri would be changed from $6.35 per ton to $13.70 and from $6.60 to $35.73, respectively. Traffic counts to be of any value require that the investigator look beyond the total figures into the character of the traffic, Dr. Duncan warned.

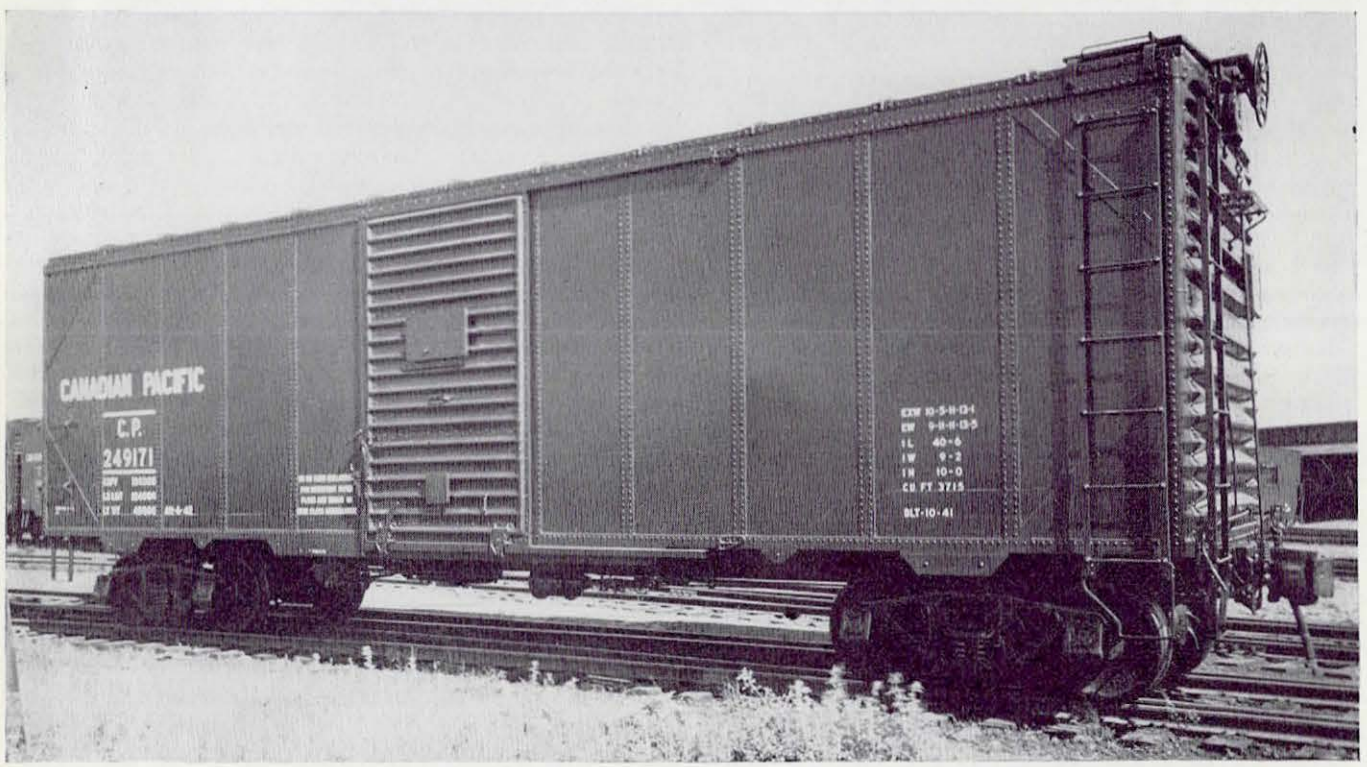
Plywood Sheathing on Canadian Pacific Cars

FIVE-PLY fir siding, 5/8 in. in thickness, will be used to replace .10-in. steel sheathing in the construction of 750 box cars now being built for the Canadian Pacific Railway. Before deciding upon this substitution the railroad tested the practicability of the idea by removing the steel sheathing from a 40 ft. 6 in. double-sheathed car and replacing it with plywood. This car was then subjected to severe service tests and met all necessary requirements.

A net saving of 2,063 lb. of steel per car is realized in the replacement of the steel by plywood.

In the experimental car, after the steel sheathing was removed, plywood was applied to the Z-bar posts which formed the car structure after a bar equal in thickness to the Z-bar leg was welded on to form a cover and means for fastening the plywood in place. The plywood siding was bolted in place. The bolts pass through the cover plate, the plywood and the post, using the rivet holes which were already in the posts. The joint between the outside steel cover and the plywood was then sealed with cement to prevent the lodging of water and dust in the joints.

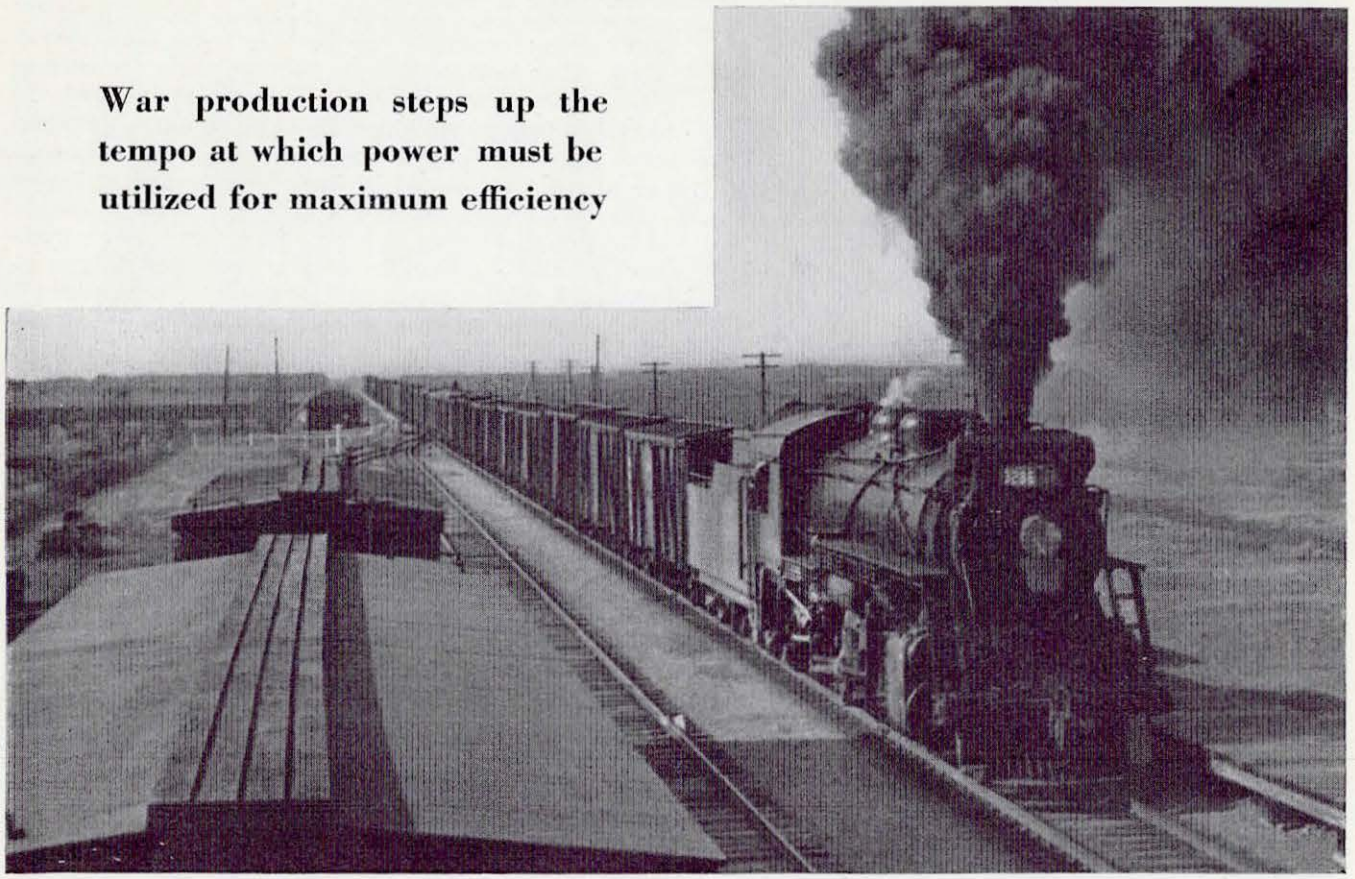
This double-sheathed car has many advantages over the single-sheathed car of the last war period. The plywood car retains standard dimensions inside, whereas the single-sheathed car loses 1 5/8 in. in width and saves only about 500 lb. of steel. Because of difficulties in obtaining clear lumber in standard lengths the single-sheathed car suffers in comparison, as loose knots, weather checks and splits, and additional joints allow more dust and water to enter the car. In addition to saving more steel per unit the double-sheathed plywood car provides greater protection to vital war shipments.



Double-Sheathed Car Using Laminated Wood Sheathing Which Releases 2,063 Lb. of Steel

Greater Use From Locomotives*

War production steps up the tempo at which power must be utilized for maximum efficiency



THE subject of locomotive utilization is one of the topics most prominently before the railroad men today. That greater utilization is being accomplished is evident in a survey of average locomotive performance, as indicated in the five tables.

Railroads handling a large volume of through business on fast schedules may operate solid trains through terminals without switching. Under such operation, delays incidental to moving locomotives from the train yard, if yarded, to the roundhouse or service track, servicing them and returning them to the trains, is the governing factor. Under average conditions, the total terminal delay will probably be from 30 to 60 min., including inspection and air test, depending, of course, upon the distance from the train yard to the point of servicing and the facilities available for such servicing. When conditions will not permit the delay incidental to such handling, consideration may be given to the practicability of taking fuel and water at intermediate stations and servicing the engines in the terminal train yard without detaching them; or, as an alternative, providing fuel and water facilities to serve through tracks in the train yard. Terminal delay may be reduced materially if the engine is not detached. Where possible, through freight trains should be maintained intact at terminals. The advantages are obvious.

Engine handling, fueling, servicing and facilities in general are most important factors in better locomotive utilization. Water cranes must be properly located and of sufficient capacity. For passenger trains, cranes should be located at each end of the station platform. Fueling facilities, whether on main tracks or in yards, should be conveniently located and of such design as to result in the least delay to trains using them. Cinder pits for the dumping of ash pans should be properly located and adequate. Track layouts must be planned carefully.

One road reports a saving of approximately 55 min. on each manifest freight train at two terminals 117 miles apart on schedules where locomotives are operated through for a distance of 470 miles, as a result of the rearrangement and construction of modern facilities. At each of these terminals the taking of coal, water and sand, the dumping of ash pans and servicing, is done with one spotting of the locomotive. The main track servicing facilities include a coaling station equipped with oscillating coal aprons, two track cinder pits for eastward and westward movements, two water cranes of large capacity, and sanding devices. Only 4 min. are required to take 15,000 gal. of water and 30 tons of coal.

Long Engine Runs

The objective in extending locomotive runs is to increase their productive time; that is, to obtain a greater monthly mileage and utilization of the locomotives. Some of the advantages and economy of running locomotives over two or more districts when physical and operating conditions permit, are as follows:

Increased mileage: Increasing the length of runs 100 per cent does not necessarily mean an increase of

* From a report presented to the American Association of Railroad Superintendents by a committee of which E. H. Piper, assistant to vice-president, Chicago, Burlington & Quincy, was chairman.

100 per cent in locomotive mileage. It does, however, result in increased mileage, depending on how the runs fit in with train schedules.

Reduction in number of locomotives: Increased mileage of power results in a decreased number of locomotives required.

Increased railroad capacity: Reducing the number of locomotive units required results in less need for additional facilities.

Economy at terminals: Eliminating the turning of locomotives results in decreased mechanical and stores expenses. Reduction in the required number of tools and machines and their assembly at main terminals where they may be utilized to greater capacity, is particularly important under present conditions.

Saving of fuel: This results in part from diminished need for firing up and holding power under steam.

Reduction in engine failure: Experience has shown that engine failures are apparently not affected by the mileage made during the individual run.

Table No. 1

Miles Per Active Locomotive Day—Passenger Service

Road	Calendar Year 1941	1940	1939	1938	1937
1	201.2	200.9	205.2	203.2	208.2
2	245.4	244.7	235.9	230.9	226.0
3	214.2	210.3	203.7	202.6	182.5
4	155.9	147.5	156.9	147.5	144.0
5	167.4	160.8	162.1	151.2	145.1
6	193.0	165.0	162.2	164.7	153.7
7	151.8	141.7	140.4	133.4	142.6
8	209.7	205.5	208.4	200.8	187.5
9	164.1	161.6	160.8	164.1	173.5
10	273.5	281.5	271.1	251.1	251.6
11	233.7	234.0	223.9	200.9	203.3
12	246.6	232.0	229.6	220.1	229.9
13	283.3	281.7	264.9	254.2	253.1
Eastern District	187.6	185.6	180.7	176.1	171.8
Pocahontas District	178.5	163.8	168.2	157.3	150.9
Southern District	174.4	165.4	156.8	155.4	156.7
Western District	216.9	211.3	202.0	193.6	193.8
United States	195.6	190.8	184.2	178.6	177.0

Reducing Layovers

Enginehouse performance should be charted for the various classes of power handled, basing such charts upon the arrival and departure times of each class of locomotive employed. Such charts will definitely show the normal turning time of each class of engine at the particular house. While this time will vary from day to day as business fluctuates, nevertheless, a measure of performance in turning time will be developed from which to follow the matter daily with enginehouse forces to be sure that, on the one hand sufficient power is available to protect the service, and on the other hand that surplus power is set aside.

Consideration should also be given to improving the utilization of power by uniting local and branch lines or coupling a local or branch line run with a switching trick. Sometimes a slight change in the arrival time of a schedule may permit utilization of power for a short run.

A careful check of the layover time of all locomotives at all terminals should be made often enough to insure that locomotives are not held longer than necessary. Enginehouse foremen should be furnished with as accurate schedules as possible of all arrivals and departures, to enable them to plan their despatch. The problem is one requiring the close collaboration of the superintendent, chief dispatcher, trainmaster, master mechanic, yardmaster and enginehouse foreman.

Table No. 2

Miles Per Active Locomotive Day—Freight Service

Road	Calendar Year 1941	1940	1939	1938	1937
1	114.0	107.6	106.0	103.5	105.4
2	129.1	126.8	124.4	123.3	124.2
3	113.3	115.0	112.9	103.0	101.8
4	97.0	92.0	87.3	86.4	84.4
5	99.3	92.4	90.7	85.2	96.0
6	95.4	87.5	90.3	83.1	93.3
7	95.6	81.1	81.6	74.2	83.9
8	146.3	124.4	122.2	118.0	120.4
9	115.5	102.3	96.6	86.9	92.9
10	145.2	128.9	119.6	117.9	124.9
11	112.0	100.6	97.1	98.1	107.3
12	121.3	110.2	105.7	101.4	110.2
13	142.0	134.2	128.1	115.4	119.7
Eastern District	114.9	110.0	107.1	102.6	106.1
Pocahontas District	99.3	93.4	90.4	86.2	88.9
Southern District	112.3	98.7	97.1	90.1	96.2
Western District	121.4	110.7	105.8	101.8	108.0
United States	116.4	107.5	104.0	99.3	104.4

Raising Gross Tons Per Train Hour

To effect an increase in the gross tons per freight train hour, careful study should be made of the effect on each individual division or sub-division to determine just where the balance lies that makes for the greatest efficiency in the use of locomotives. The tendency when increasing the tons per train is to decrease the tons per train hour unless this balance is carefully worked out.

To correlate handling as between divisions and districts, it is suggested that information as to business to be handled, weather conditions, connecting line schedules, cutoffs and other pertinent information, be concentrated in one central office with which the chief dispatchers may confer. Such handling is a day-to-day matter and effects the greatest good for the railroad as a whole, rather than good performance for an individual division at the expense of another.

There are a number of matters to be considered in increasing gross tons per hour and the balance, therefore, must be determined carefully to obtain the greatest efficiency in the use of the locomotive.

Hot boxes on both freight and passenger trains cause serious delays, and train delays may affect locomotive utilization. Hot box control is receiving constant attention on the part of the lubrication committee of the Association of American Railroads, as well as the lubrication committee of the Car Department Officers' Association, and progress is being made in the matter. New practices have been developed and tried with some success—such as the use of year-round oil in lieu of summer and

Table No. 3

Hours Per Active Locomotive Day—Yard Service

Road	Calendar Year 1941	1940	1939	1938	1937
1	14.1	13.3	12.4	11.3	12.8
2	13.9	13.3	13.1	12.8	13.3
3	14.0	12.6	12.9	12.6	13.4
4	14.7	14.1	13.4	12.5	13.7
5	9.8	9.7	9.4	8.9	10.1
6	9.0	7.8	7.7	7.2	7.9
7	9.7	9.5	9.3	9.0	9.5
8	12.4	11.6	11.6	11.1	11.2
9	9.5	8.8	8.6	7.7	9.2
10	13.7	12.4	11.5	10.9	11.4
11	12.0	10.9	10.5	10.2	10.8
12	15.0	13.2	12.3	12.4	13.7
13	13.8	12.8	12.4	12.3	12.3
Eastern District	13.9	12.9	12.4	11.7	12.7
Pocahontas District	12.6	12.2	11.6	11.0	12.1
Southern District	10.3	9.5	9.3	8.8	9.5
Western District	12.6	11.6	10.9	10.5	11.3
United States	12.9	11.9	11.4	10.8	11.7

winter grades. Oil companies have spent much time and money in such research work. Improved grades of waste, more free of lint, are in use. One company has on the market a bearing, the lining of which has a higher melting point than conventional bearing metals. This is also said to possess greater hardness at above-normal temperatures and a lower coefficient of friction.

Some claim that many hot boxes have their origin at railroad crossings, waste grabs resulting from rough crossing frogs. Another source of waste grabs, it is stated, is the severe handling of empty cars in switching operations. One instance is cited of the pre-switching inspection of 92 empty coal cars on which the box lids were lifted and the bearing found to be O.K.; yet, after the switching operation 30 per cent of these cars had potential waste grabs. The hot box is of vital concern to every operating and mechanical officer and their concerted efforts should be toward improved control.

Table No. 4

Miles Per Active Locomotive Day*—Yard Service

Road	Calendar Year 1941	1940	1939	1938	1937
1	84.6	79.8	74.4	67.8	76.8
2	83.4	79.8	78.6	76.8	79.8
3	84.0	75.8	77.4	75.6	80.4
4	88.2	84.6	80.4	75.0	82.2
5	58.8	58.2	56.4	53.4	60.6
6	54.0	46.8	46.2	43.2	47.4
7	58.2	57.0	55.8	54.0	57.0
8	74.4	69.6	69.6	66.6	67.2
9	57.0	52.8	51.6	46.2	55.2
10	82.2	74.4	69.0	65.4	68.4
11	72.0	65.4	63.0	61.2	64.8
12	90.0	79.2	73.8	74.4	82.2
13	82.8	76.8	74.4	73.8	73.8
Eastern District	83.4	77.4	74.4	70.2	76.2
Pocahontas District	75.6	73.2	69.6	66.0	72.6
Southern District	61.8	57.0	55.8	52.8	57.0
Western District	75.6	69.6	65.4	63.0	67.8
United States	77.4	71.4	68.4	64.8	70.2

* Calculated from tabulation on basis of 6 miles per locomotive-hour.

Minimizing Slow Orders

Slow orders are always a source of delays and thus a factor in securing maximum use of locomotives. They cannot be eliminated since they are placed as a matter of safety. They can, however, be minimized in many instances and officers in charge of track maintenance should be particularly alert to this feature. One source of slow orders prevalent on many railroads is that of track surfacing. Skeletonizing track should be planned carefully so that no more skeletonizing is done at any time than is necessary. Sometimes track is skeletonized too far in advance of the receipt of ballast material, resulting in slow orders over too great length of track and in effect unnecessarily long. Obviously slow orders are more serious on single track than on multiple track, for in multiple track territory time can be saved by routing movements over an alternate track. Minimizing slow orders is an important problem for division operating officers.

The use of auxiliary water tanks may be one of expedience or necessity. Without doubt they eliminate train stops and save time. Further, they are necessary in some regions where it is difficult to obtain suitable water. In other instances the physical characteristics of the railroad control. It costs money and may delay important freight trains to take water at the foot of a grade or in a sag. Such objections as the problem of heating to prevent connecting hose lines from freezing in severe weather, and the fact that the tanks must be detached when engines are placed in the house, are matters to be weighed in considering their use as a factor in the problem of getting greater use from locomotives.

Conclusions

Summarizing, the committee recommends:

1. That when running power through terminals, careful consideration should be given to the physical characteristics of the track arrangement, and also to the adequate and proper location of engine fueling, watering and other servicing facilities, to bring about more expeditious handling. Such consideration should be given also to intermediate facilities.

2. That engine runs, where operating conditions justify, be extended to increase productive time.

3. That special attention be devoted to the turning time of locomotives at terminals to insure that locomotives are not held longer than necessary and that power may possibly be set aside. Consideration should be given also to connecting local runs with switching tricks.

4. That raising gross tons per freight train hour should be studied carefully in the light of obtaining greater use of locomotives.

5. That improved control of hot boxes is necessary in increasing the productive time of locomotives. The concerted effort of all mechanical and operating officers should be directed toward that end.

6. That slow orders receive the close attention of operating and maintenance officers, with the thought of holding them to the minimum, thereby increasing the productive time of locomotives.

7. That auxiliary water tanks be used to eliminate train stops where operating conditions justify.

8. That operating and mechanical officers collaborate closely in concerted effort to close whatever gap, if any, still remains between the service that each locomotive is actually rendering and the potential service that it is capable of rendering.

Table No. 5

Performance of Active Steam Locomotives, Including Protection Locomotives, For 48-Hour Period

	Hours	Ratio to System Total	Class of Service	Sub-Div'n of Service
Freight Service:				
Main Line:				
Productive	5,475	14.66	26.72	33.24
Roundhouse	5,000	13.39	24.40	30.36
Waiting assignment	5,995	16.05	29.26	36.40
Total	16,470	44.10	80.38	100%
Branch Line:				
Productive	1,284	3.44	6.27	31.93
Roundhouse	898	2.41	4.38	22.33
Waiting assignment	1,839	4.92	8.97	45.74
Total	4,021	10.77	19.62	100%
Total freight service	20,497	54.87	100%	
Passenger Service:				
Main Line:				
Productive	1,950	5.22	30.29	31.95
Roundhouse	1,823	4.88	28.32	29.86
Waiting assignment	2,331	6.24	36.20	38.19
Total	6,104	16.34	94.81	100%
Branch Line:				
Productive	92	.25	1.43	27.55
Roundhouse	83	.22	1.29	24.85
Waiting assignment	159	.43	2.47	47.60
Total	334	.90	5.19	100%
Total passenger service	6,438	17.24	100%	
Yard Service:				
Productive	4,834	12.95	46.41	46.41
Roundhouse	2,093	5.60	20.10	20.10
Waiting	3,488	9.34	33.49	33.49
Total yard service	10,415	27.89	100%	100%
Grand Total System	37,344	100%		

Railroads-in-War News

Eastman Sets New Wages for T. P. & W.

Train and engine service employees to be paid standard rates of other railroads

The establishment of a schedule of wages and working conditions for engine and train service employees on the Toledo, Peoria & Western was announced on July 1 by Joseph B. Eastman, director of the Office of Defense Transportation.

The average net increase of payroll would be approximately $3,200 monthly, it was pointed out. This would bring the employees up to the standard rates of compensation as paid to other railroad employees "in similar locations in the same territory," according to Mr. Eastman.

The announcement went on to say that the rules and rates of pay as promulgated are those that are generally in effect and have been in effect for many years on railroads throughout the nation except that, in this instance, many of the rules are modified to take into consideration operating factors peculiar to the T. P. & W. "This road, operating as a bridge line between other railroads, has distinct operating problems not common to trunk line railroads," asserted Mr. Eastman. He went on to add that under conditions of normal operation the new rules do not impose arbitrary penalties on the railroad.

"The issue with respect to wages and working rules which was precipitated by the proposals of the former management of the T. P. & W.," said Mr. Eastman, "has not been adjudicated because the former management did not take advantage of the opportunity to appear before the arbitrator appointed by the War Labor Board. We have not undertaken to go into the issue, but to provide, during the continuance of the present management, for wages and working rules which are in consonance with those generally prevailing upon the railroads of the country."

The ODT statement also noted that the new rules will not require the payment of any compensation for work not performed, that was not required to be paid for under rules and working conditions that were in existence on the railroad for a period of 10 years prior to December 29, 1941.

The effect of these rules, it continues, will be to eliminate the payment of a considerable amount of money that has heretofore been required for overtime. This equalization of pay among the individual employees will be brought about by the revision of train schedules, and no additional personnel will be required to meet the adjustments, it was stated.

The new rules, together with the pay rates, are to remain in effect pending the settlement of the dispute between the railroad corporation and the employees. The wage increases will be retroactive to March 25.

Accounting Rules Modified

The Interstate Commerce Commission, Division 1, has issued two orders modifying its system of accounts for steam railroads so as to permit the carriers to set up reserves for retarded replacements and renewals. The orders are dated June 29, 1942.

Tank Truck Exemption from ODT Order No. 6 Extended

The Office of Defense Transportation has extended from July 1 until July 15 its general permit exempting tank trucks from the provisions of General Order No. 6 which places restrictions on the operation of trucks used in local delivery services.

Beyer on Manpower Commission

Otto S. Beyer, director of the Office of Defense Transportation's Division of Transport Personnel, has been appointed to membership on the War Manpower Commission, according to a June 27 announcement from WMC Chairman Paul V. McNutt. Mr. Beyer will represent ODT and the War Shipping Administration.

ODT Prepares to Clear Ports of "Frustrated" Freight

Director Eastman of the Office of Defense Transportation on June 27 issued General Order No. 12 which authorizes the director of ODT's Division of Railway Transport to require any railroad serving a port to move to such destination as ODT may specify "any export, coastwise or intercoastal shipment of freight which it may have in its possession in such port, notwithstanding the provisions of any general order heretofore issued by the Office of Defense Transportation, or of any instructions contained or routing specified in the bill of lading of any such shipment."

The order, as explained in an accompanying statement, "makes it possible to relieve certain ports of cargoes on hand, or in storage, many of which were destined for foreign ports at about the time of enemy occupation of those ports." At the same time the statement emphasized that issuance of the order "does not imply that there exists any serious port congestion." "The fact remains," it added, "that certain of this so-called 'frustrated' freight occupies cars, ground, and warehouse space while it awaits final disposition, and the order simply makes possible the immediate removal of this freight to assure peak capacity for actively-moving commodities."

Roads Will Get Cars Authorized in 1942

So says Pelley who sees locomotive situation now as "very indefinite"

President J. J. Pelley of the Association of American Railroads thinks that the railroads will get this year all of the freight cars authorized by the War Production Board, but he sees the locomotive situation as "very indefinite" because of the Army's demands for steam locomotives and the necessity for constructing Diesel engines for the Navy.

Mr. Pelley's statements were made in a June 20 letter to Senator O'Mahoney, Democrat of Wyoming, setting out information which had been requested by the Senator. The latter used the letter in connection with a presentation he made last week before the Senate agricultural committee's sub-committee on the utilization of farm crops. The letter follows in part:

"*Cars:* Railroads had on order April 1, 1942, 69,303 cars and under the authorities issued by SPAB and WPB as of that date there was authority to build 37,551 cars, which left us with 31,752 more freight cars on order than we had authority to construct. Up until June 20th there has been no change in the authorities for the construction of additional freight cars. There does not now appear to be any question about our being able to construct 21,646 additional freight cars which were authorized as of June 1st. This lower number is due to the fact that we received 9,653 cars in April and 6,252 cars in May.

"*Locomotives:* As of April 1st we had on order 932 locomotives and under the authorities of SPAB and WPB we were told that materials would be allocated for 803 locomotives which would force a carry-over into 1943 of 129 locomotives. Locomotive builders delivered to the railroads 46 in April and 47 in May and as of June 1st there remained authority to build 710 locomotives with 950 on order. Due to the shortage of material and the necessity for constructing Diesel engines for the Navy, which will take the Electro-Motive Company out of building railroad locomotives and other diversions, it looks now as if production from June 1st to the end of the year will not exceed 425 locomotives and if this situation cannot be improved it will mean that of the locomotives on order June 1st 525 will have to be carried over until next year.

"The locomotive situation is very indefinite because the Army has come in now for a large number of steam locomotives

(*Continued on page 30*)

Loadings Seen As Continuing Upward

Shippers Boards place figure for third quarter at 6,959,721 cars

Freight carloadings in the third quarter of 1942 are expected to be 4.6 per cent above actual loadings in the same quarter of 1941, according to estimates compiled by the 13 Shippers' Advisory Boards.

On the basis of those estimates, freight carloadings of the 26 principal commodities will be 6,959,721 in the third quarter of 1942 compared with 6,653,849 for the same commodities in the corresponding period in 1941. Nine of the 13 Boards estimate an increase in carloadings for the third quarter of 1942 compared with the same period in 1941, but four—the New England, Atlantic States, Northwest and the Trans-Missouri-Kansas Board—estimate decreases.

While normally including 29 commodities, the estimates now include only 26, those for automobiles, trucks and parts; ore and concentrates; and chemicals and explosives having been discontinued.

The tabulation below shows actual carloadings for each district in the third quarter of 1941, the estimated loading for the third quarter of 1942, and the percentage of increase of the 26 principal commodities:

Shippers' Advisory Boards	Actual Loadings Third Quarter 1941	Estimated Loadings Third Quarter 1942	Per Cent Increase or Decrease
New England	111,066	90,591	−18.4
Atlantic States	790,513	789,426	−0.1
Allegheny	1,103,059	1,138,260	+3.2
Ohio Valley	970,448	1,154,578	+19.0
Southeast	749,158	777,214	+3.7
Great Lakes	283,556	284,078	+0.2
Central Western	227,768	240,940	+5.8
Mid-West	856,511	890,130	+3.9
Northwest	231,688	198,445	−14.4
Trans-Missouri-Kansas	372,043	365,016	−1.9
Southwest	423,332	444,850	+5.1
Pacific Coast	282,798	322,081	+13.9
Pacific Northwest	251,909	264,112	+4.8
TOTAL	6,653,849	6,959,721	+4.6

The 13 Shippers' Advisory Boards expect an increase in the third quarter of 1942 compared with the same period one year ago, in the loading of 19 of the commodities listed, but a decrease in seven. Among those showing the greatest increases are the following: Machinery and boilers, 23 per cent; hay, straw, and alfalfa, 16.5 per cent; cotton, 11.9 per cent; gravel, sand, and stone, 10.9 per cent; coal and coke, 10.7 per cent; canned goods including all canned food products, 9.3 per cent; livestock, 9.7 per cent; fresh fruits other than citrus fruits, 8.9 per cent; cement, 7.1 per cent; fertilizers of all kinds, 6.6 per cent, and iron and steel, 5.7 per cent.

The seven commodities for which decreases are estimated and the amount of the decreases follow: Agricultural implements and vehicles other than automobiles, 22.7 per cent; grain, 17.8 per cent; petroleum and petroleum products, 11.7 per cent; sugar, syrup, and molasses, 7.9 per cent; paper, paperboard and prepared roofing, 4.8 per cent; lime and plaster, 3.2 per cent, and fresh vegetables other than potatoes, one-half of one per cent.

War Bonds Slogan on P.R.R. Cars

As a further step in its efforts to promote the sale of War Savings Bonds, the Pennsylvania is stenciling the slogan, "Buy War Bonds," prominently on a number of its freight cars. Initially, 500 box cars have been selected to bear the slogan. It will appear to the left of the door in large letters covering an area 9 feet 4 inches in length, above the railroad's name or insignia.

War Department Commends Railroads In War Role

Efficiency and cooperation of the nation's railroads in meeting the huge demands of the war program were commended by Brigadier General C. P. Gross, chief of Transportation Service, Services of Supply, in a recent letter to the Association of American Railroads.

The letter, addressed to Mr. J. J. Pelley, president of the A. A. R., noted that tire and gasoline rationing have compelled the "nation to rely more heavily on rail transportation," adding to the railroads' problems of moving the vast amount of war traffic.

This traffic, General Gross said, includes such things as freight unloaded at ports from ships, hauling of materials to factories, camps and depots, and the "incessant moving of military personnel."

"Years of increased efficiency in operation of the railroads, coupled with the patriotic desire to render a national service, have enabled the railroads to meet this situation most satisfactorily," General Gross wrote.

"I wish to express to the Association of American Railroads through you my appreciation of the part the railroads are executing in our national effort. The railroads of our country have shown once again that they are anxious to cooperate."

Roosevelt Signs Independent Offices Bill

President Roosevelt has signed H. R. 6430, the independent offices appropriation bill which carries funds for the Interstate Commerce Commission for the fiscal year ending June 30, 1943.

Also included in the bill are the funds for the elimination of grade crossing work under the Public Roads Administration of the Federal Works Agency.

'41 Explosives Record Perfect

A. A. R. reports no casualties in '41, but war hazards threaten record

In the transportation by rail of explosives of all kinds in Canada and the United States in 1941 there were no explosions, no fires, no deaths, no injuries.

This perfect score is the highlight of the annual report of W. S. Topping, chief inspector of the Bureau of Explosives of the Association of American Railroads. In the transportation of "other dangerous articles"—charcoal, matches, gasoline and petroleum products, storage batteries, and certain chemicals—there were 81 fires, three deaths, and 16 persons injured, and property loss amounted to $261,751. All of the deaths and four of the injuries resulted from the 13 gasoline fires.

During the year there were 51 situations classed by the Bureau as "near accidents," any of which might have resulted in a serious explosion. Of these, 15 were attributed to rough handling, train accidents, or other conditions for which the carriers were responsible, while the shippers were said to be at fault in the other cases.

The annual summary of railway transportation losses chargeable to explosives and other dangerous articles during 1941 lists 821 incidents, resulting in a property loss of $298,474. In 1940 there were 840 such incidents, resulting in a loss of $143,051. Of the 1941 loss 85 per cent was chargeable to inflammable liquids, principally gasoline and crude oil, and about 80.5 per cent of the total was due to 33 train accidents. Negligence of shippers' employees was the second largest cause of loss, amounting to $28,103.

Many new explosives plants have been constructed and many others will go into operation shortly, and the movement of petroleum products by tank car has undergone a great expansion, so that the work and responsibilities of the Bureau are proportionately increased by wartime conditions, the report continues. The staff of inspectors engaged in field work has been enlarged from 16 to 18, while the number of cars of explosives inspected in transit increased from 1,027 to 2,497. At the request of the military authorities, arrangements have been made for the transportation by express in passenger trains of certain classes of explosives not heretofore accepted, and close watch is being kept on the loading and handling of these shipments. Due to the shortage of steel suitable for making metal drums, re-use of single-use containers for certain dangerous articles is being authorized after inspection, and many applications for approval of the use of substitute materials are being considered.

During 1941 the tank car department of the Bureau considered 522 applications for approval of designs, materials and construction of new tank cars and of changes in existing cars and their equipment to adapt them to present requirements. During the

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Big Salvage Drive Is Now Beginning

I. C. C. will be asked to weigh war needs in considering abandonment cases

A series of meetings to promote the War Production Board's salvage campaign on the railroads has been arranged for this month with the first meeting scheduled for New York on July 7. Arrangements for the meetings were made by B. C. Bertram, coordinator for railroads in the Industrial Salvage Section of WPB's Bureau of Industrial Conservation.

R. W. Brown, president of the Lehigh Valley, will preside at the New York meeting, while the other meetings and their presiding officers are scheduled as follows: July 8, Atlanta, Ga., E. E. Norris, president of the Southern; July 10, Chicago, Ralph Budd president of the Chicago, Burlington & Quincy; July 13, San Francisco, Calif., W. M. Jeffers, president of the Union Pacific; July 16, Dallas, Tex., M. S. Sloan, chairman of the Missouri-Kansas-Texas.

The meetings, which will cover all phases of railroad salvage, will be attended by the emergency salvage directors which each railroad is appointing to cooperate with WPB. Also, they will be attended by other railroad officers interested in salvage; and by representatives of the Association of American Railroads, the American Short Line Railroad Association, various units of WPB, the War Department, the Navy, and the Office of Defense Transportation.

In line with the foregoing J. J. Pelley, president of the Association of American Railroads, on June 30, sent to member roads a letter in which he asked the carriers to get in every bit of used rail that it is possible to salvage, calling their attention to the fact that rail requirements for defense needs have risen from 15,000,000 feet as of May 1, 1942, to 40,000,000 feet today.

"This," he went on to say, "of course, calls for an increased number of switches and other track accessories. This extreme need for any kind of track has become so critical that drastic steps are being taken by the War Production Board and the Army and Navy Munitions Board to cure this immediate crisis by either outright purchase or, as a last resort, by requisition."

Mr. Pelley also pointed out that the War Production Board has in operation two salvage sections which are cooperating fully: The Industrial Salvage Section and the Special Projects Salvage Section of the Bureau of Industrial Conservation. Under this set-up, he continued, the Industrial Salvage Section has charge of the normal flow of scrap and the Special Projects Salvage Section handles all matters of salvage in which there are any political, financial, or legal aspects.

The letter went on to tell the carriers that "a clearcut national plan has been worked out to comb every section of the United States for all used rail and switches. The plan has the indorsement of the Association of American Railroads."

Briefly, the plan has three main parts, which are as follows:

1. Under the direction of the Industrial Salvage Section, an intensive drive will be started to get in every foot of usable rail.

2. The Special Projects Salvage Section is especially equipped to expedite the various problems which arise in connection with abandonments. These may be considered in three classes:

(a) Those now pending before the Interstate Commerce Commission.

(b) Those previously rejected by the commission.

(c) Those being considered by the management.

3. A close study of every spur track serving industry should be made. Wherever possible, unused or surplus track should be taken up.

Return-Load Requirement for Trucks Postponed to July 15

The Office of Defense Transportation has further postponed from July 1 until July 15 the effective date of that provision of General Orders 3, 4 and 5 prohibiting the operation of over-the-road trucks unless loaded to 75 per cent of capacity on the return trip. The orders apply in turn to common, contract and private carriers; and the postponement "was issued to allow more time for a general revision of the orders."

N. & W. Employee Meetings Off

In line with A. A. R. policy and in order to conserve passenger equipment for the movement of troops and essential wartime civilian travel, the Norfolk & Western has cancelled the 1942 annual meeting of its system-wide Better Service Conference, as well as the conventions of the Surgeons Association and the white and colored Veterans Associations. In addition, it was announced that all local Better Service Club meetings and Regional Better Service Committee conferences will be discontinued during the months of July, August and September. It is urging all its pass-holders to abstain from all unnecessary travel.

War Department Photographs Brill Plant at Work

Beginning at the plant of the J. G. Brill Co., Philadelphia, on June 25, a crew of nine motion picture photographers and two "still" photographers, in addition to a script writer, will visit industrial plants throughout the country in order to obtain a picture story for War Department records of the war effort of American industry.

The purpose in getting these pictures is threefold: first, to make a historical record of the production effort; second, to make a series of short movie stories to send to the various branches of the Army for educational purposes; and third, to release interesting sequences to the newsreels for showing to the public. Photographs will be taken only of unrestricted items manufactured in the unrestricted areas of plants. Brill is the first plant to be selected for the purpose. Pictures made there will show ordnance materials building side by side with transit vehicles necessary to get workers to their jobs.

Eastman Creates A Large Agency

Office of Defense Transportation shown to have 827 employees as of June 12

The fact that the Office of Defense Transportation had recruited 827 employees by June 12 was revealed this week when hearings on the first supplemental national defense appropriation bill for 1943 were made public. The bill, H. R. 7319, which was presented to the House on June 29, carries an appropriation for ODT for the coming fiscal year of $7,216,515.

A breakdown of the Bureau of the Budget request for the ODT shows that that organization expects to have for 1942, 894 employees at a cost of $2,481,560, and for 1943, 1,856 employees costing a total of $5,262,480. Mr. Eastman was questioned about the large anticipated increase during the coming fiscal year, and he attributed this to the fact that he had recently been given additional duties in connection with rubber conservation. He also noted that the work of all his bureaus was expanding.

Discussing the work of the Division of Railway Transport, Mr. Eastman disclosed that that division has a man who is working on the matter of a refrigerator-car pool and on the possibilities of making up trains so that they can be operated through intermediate terminal points without break-up and classification.

The ODT director also told the House appropriations subcommittee that his organization has a man looking into the movement of iron ore by rail. "If anything should happen to the Soo Canal," he declared, "we would be in a very dire situation, and we have been studying the possibility of alternative rail routes, the possibility of hauling iron ore to Chicago all-rail, and the possibility of hauling to Escanaba, Mich., avoiding the use of the Soo Canal—how much it would cost to develop that route and improve the piers, and also the possibility of moving the ore by boat to a point on Lake Superior and then across by rail to Lake Michigan, avoiding the canal in that way."

Mr. Eastman was questioned by the subcommittee on the subject of the rationing of freight and passenger transportation. He asked Henry McCarthy, director of ODT's Division of Traffic Movement, to comment on the proposition. It was Mr. McCarthy's view that if the time comes when traffic congestion on scarcity of equipment or deficiency in locomotive power requires that the country operate on priorities and preferences, the ODT would need approximately 22 experienced traffic men in Washington to interpret and define policies. "And," he added, "that will require a staff outside of Washington." He estimated this field staff at 54 men.

Representative Ludlow, Democrat of Indiana, wanted to know whether or not Mr. Eastman was thinking of the possibility of rationing passenger accommodations.

"Yes," replied Mr. Eastman, "there is a possibility of having to ration passenger

transportation, if you can call it that. It may be necessary to establish some measure of control, so that those who must travel will have prior opportunity. That possibility is likely to arise as quickly here in Washington as in any other place."

Rail Affiliates Ordered to Coordinate Bus Services

Santa Fe Trail Transportation Company and Southwestern Greyhound Lines, affiliates respectively of the Atchison, Topeka & Santa Fe and the Southern Pacific, have been ordered by the Office of Defense Transportation to coordinate their operations between Kansas City, Mo., and Albuquerque, N. M. Under the order, Special Order ODT No. B-6, which is based on voluntary plans submitted by the two companies, they are directed to honor each other's tickets, to stagger schedules, to use station facilities jointly wherever practicable, and to eliminate certain runs.

A.A.R. Directors Meeting

The monthly meeting of the directors of the Association of American Railroads was held in Washington, D. C., on June 26. Although no announcement was made of the results of the meeting, it is understood that the directors heard a discussion of the railroad situation by Director Eastman of the Office of Defense Transportation.

Although Mr. Eastman felt that there were grounds for thinking the carriers would meet the country's freight needs during the coming months, he warned them against undue optimism which, he said, might lead to a relaxation of the present vigorous campaign to keep cars moving fast and heavily loaded.

New Haven Ends "Free Space" in Parlor-Lounge Cars

All space in the lounge section of parlor-lounge cars on the New Haven hereafter will be sold by reservation on the same basis as chair space in regular parlor cars. This action, effective June 28, eliminates the so-called "free space" in the lounge section of parlor-lounge cars, which previously has not been sold. It is taken because increasing passenger traffic makes it necessary to obtain maximum use of parlor cars.

Where only one such car is operated regularly on a train, the seats in the parlor end of the parlor-lounge car will continue to be sold without smoking privileges, but when regular parlor cars are operated in addition to a parlor-lounge car all seats in the parlor-lounge will have smoking privileges.

ODT and OCD to Organize Motor Transport Units

The Office of Civilian Defense and the Office of Defense Transportation are cooperating in a plan for the organization of motor transport units in various parts of the country to facilitate the movement of troops and civilians in event of emergency, it was announced this week.

ODT has sent letters to the large transportation companies explaining the purposes of the plan. Each letter was accompanied by an application blank and tables of organization for use of companies desiring to participate in the plan.

Each unit would consist of 24 trucks or buses capable of transporting 40 passengers each. Depending on local conditions, each unit also may include a five-passenger automobile, a service truck, a tank truck, and a light pick-up truck.

ODT Appointments Announced

Harold A. Hobson, of Cleveland, Ohio, has been appointed deputy director of the Office of Defense Transportation's Division of Railway Transport to assist Associate Director Charles B. Colpitts, who is in charge of rail-truck coordination for the Eastern and Southern regions. William B. Russell, of Atlanta, Ga., has been named assistant director of rail-truck coordination for the Southeast region and will be in charge of the Division's Atlanta office.

Mr. Hobson, who will maintain headquarters in Washington, D. C., has been associated with the Pennsylvania since 1907. At the time of his appointment he was assistant to the general superintendent in Cleveland. Mr. Russell began his railway career in 1921 as a traffic inspector for the Southern. He was assistant freight agent in that company's Atlanta office when he joined the ODT.

Brigadier General C. D. Young Returns to ODT

Brigadier General Charles D. Young, director of procurement and distribution, Services of Supply, War Department, was returned to inactive status on June 30, having reached the Army's statutory retirement age. General Young, a former vice-president of the Pennsylvania, will return to the Office of Defense Transportation as an assistant director, functioning as liaison on matters of material and equipment between ODT and the Transportation Service of the Services of Supply, and between ODT and the War Production Board. At the time of his call to active service, he was director of ODT's Section of Materials and Equipment.

During his tour of active duty General Young served with the Supply Division (G-4) of the War Department General Staff until last March's reorganization when he became director of procurement and distribution in the Services of Supply.

No More Trailers

Effective July 1, the War Production Board ordered a halt to production of commercial-type truck trailers for non-military use. Under the order no manufacturer will be permitted to produce any truck trailers having a load-carrying capacity of 10,000 pounds or more, except for the Army and Navy, certain designated government agencies, governments of the United Nations and for deliveries under the Lend-Lease Act.

Restrictions contained in the order do not apply to third axle attachments, which, the WPB announcement said, "have performed valuable services as substitutes in relieving the shortage of heavy trucks." The stop-production order is contained in Supplementary Limitation Order L-1-g, which also removes buses from the terms of orders in the L-1 series. Buses are now covered by General Limitation Order L-101, which is administered by WPB's Transportation Equipment Branch.

Railroads Provide Intransit Storage for Army

Discussing the development of its storage facilities, the War Department, in a July 1 statement, told of arrangements concluded during the past two months with the railroads for intransit storage of war materials. The statement said that arrangements have been made for open storage stations along rights-of-way for some 42,000 carloads, of which about three-fourths has been used.

Under this plan, it was explained, the railroads handle all loading and other operations with their own personnel and equipment. No Army personnel, aside from inspectors sent to check on handling methods and guarding, is required. The railroads are reimbursed through a warehouse receipt arrangement which assures them tariff payment while the goods are in storage.

It was estimated that the cost to the War Department of preparing these open storage facilities in the railroad yards is approximately $25 per carload, about one-quarter of the amount that would be required to construct them as a part of the Army's own storage depots. In addition, there was a considerable savings in the amount of time because the facilities were made available immediately, and there was no necessity to lease property, or for the government to construct spurs and provide equipment.

All Groups Oppose Reed's Demurrage Bill

A public hearing before a Senate interstate commerce subcommittee this week revealed that the railroads, shippers, and the Interstate Commerce Commission were unanimously opposed to the proposal of Senator Clyde Reed, Republican of Kansas, to drastically increase demurrage charges up to $25 a day. Hearings on Senate Joint Resolution 147 were begun on June 30 and concluded the following day.

Senator Reed announced at the outset of the hearing that no action would be taken by the subcommittee on the resolution at the present time, but that the record would be kept open for three or four months in order that the subcommittee might see how the car situation shapes up.

Chairman Aitchison appeared for the Interstate Commerce Commission and presented a detailed history of demurrage. He felt that the matter of demurrage should be left to the commission and that there should be no fixed statutory requirements.

Commissioner Splawn, representing the legislative committee of the commission, sent a letter to the subcommittee recording that agency's opposition to the resolution. Also, Commissioner Johnson, who handles car service matters for the commission, submitted data showing the detention of cars at various points in the country.

W. C. Kendall, chairman of the Car Service Division, Association of American

Railroads, voiced the opposition of the industry to the proposal, saying that the question of demurrage should be left to the commission. He also felt that there should be no fixed requirements regarding the time which cars may be held.

A series of witnesses representing various industries also testified in opposition to the resolution. Their contentions were that the proposition involved legislative rate making and was too drastic.

All the witnesses stressed the fact that all shippers organizations, regulatory commissions, and the railroads, are doing their utmost to cut down the time of car detention and speed up the use of railroad equipment.

East Coast Oil Movement Sets New Record

Rail movement of oil to the east coast reached a new record rate of 731,760 barrels daily during the week ended June 20, according to an announcement this week by Petroleum Coordinator Harold L. Ickes. This represents a slight increase 240 barrels daily—over the volume moved during the week ended June 13, when car loadings averaged 731,520 barrels per day.

In handling this movement the 31 oil companies loaded 24,392 cars. Including cars that were on the way back west for reloading, it is estimated that the east coast service employed 56,000 cars, taken largely from other sections of the country.

Meanwhile, Mr. Ickes announced the start of the ground survey to determine the exact route of the 24-inch Texas-to-Illinois pipe line which will provide partial relief for the east coast shortage area next winter.

At the same time the coordinator revealed that the government-owned, nonprofit common carrier line would be built for the government by War Emergency Pipeline, Inc., an organization of 11 companies which supply and distribute petroleum and petroleum products along the Atlantic seaboard.

'41 Explosives Record Perfect

(*Continued from page 27*)

year 191 incidents were reported where carriers found it necessary to transfer the contents of tank cars because of defects that permitted leakage or made movement of the car unsafe. The property loss attributed to 59 situations in which the spring-closure type of bottom outlet was involved amounted to $140,677, which exceeded the total of the five preceding years combined. At the close of the year the Bureau's test and specification department and tank car department were combined as the specification and tank car department, directed by W. E. Cooper.

The chemical laboratory of the Bureau reported on 523 samples during the year, principally taken from the regular output of manufacturers of commercial explosives, fireworks, and matches. In addition new explosives not previously shipped in this country were tested, as well as shipping containers and miscellaneous inflammable materials.

The railroad membership of the Bureau declined from 391 in 1940 to 388 in 1941, and the steamship line membership from 11 to three. Ninety-six affiliated members - principally manufacturers and shippers of hazardous products—were reported in 1941.

OPA Issues New Machinery Price Order

What an Office of Price Administration statement called a "sweeping revision of existing price regulations for machines and parts, together with a broadening of controls to cover sub-assemblies, their components, and machinery services" was announced on July 1 by OPA Administrator Leon Henderson.

The changes in the machinery price control structure are embodied in Maximum Price Regulation No. 136, as amended, which supersedes a regulation bearing the same number which was to have gone into effect July 1, 1942.

Maximum Price Regulation No. 136, as amended, covers machines and parts, and machinery services. This regulation formalizes informal controls over machinery which were set up during the fall of 1941 and the early part of 1942.

These informal controls, it was pointed out, had covered nearly all industrial machinery, railroad equipment and electrical equipment. The regulation also extends control to parts and sub-assemblies of such machinery and equipment. The Regulation, as amended, becomes operative July 22, 1942.

Eastman Cautions Railroad Analysts

Because of heavier loading and longer haul of railroad cars in the last few months, revenue tonnage and revenue ton mileage figures now provide a more accurate measurement of the volume of railroad freight traffic than carloadings, Director Eastman of the Office of Defense Transportation, said this week.

Total carloadings for the first 25 weeks of 1942 showed a gain of only 6.7 per cent over the same period last year. However, all classes of freight with the exception of less-than-carload increased by an average of 13 per cent, Mr. Eastman pointed out, while the l.c.l loadings declined 17.8 per cent "as a result of ODT's General Order No. 1 and of the railroads' efforts prior and subsequent to the May 1 effective date."

The order set a six-ton weight limit per car for l.c.l., and provided for a step-up to an eight-ton minimum, effective July 1. A ten-ton minimum will be established September 1.

Mr. Eastman pointed out that railway analysts and observers should, as a result of the merchandise car savings, carefully scrutinize the weekly reports and distinguish between carload traffic loadings, and total carloadings which include the cars loaded with merchandise. Until a full year after May 1, he said, total carloading figure comparisons will be distorted.

During the 25 weeks ending June 20, l.c.l. used 3,194,811 cars as compared with 3,885,072 in the first 25 weeks of 1941. The 1942 decrease of 690,261 cars, Mr. Eastman said, is due entirely to heavier and more efficient loading by the railroads. While the number of cars loaded dropped considerably, figures compiled by the Interstate Commerce Commission showed an increase of 16.9 per cent in l.c.l. tonnage originated during the first three months of 1942. Indications are that this increase is being maintained during the second quarter.

The Interstate Commerce Commission figures show the major railroads moved 576,211,670 revenue tons of all classes of freight in the quarter ended March 31, 1942, as compared with 478,521,196 moved in the first quarter of 1941, or a gain of 20.4 per cent. Revenue ton-miles rose from 101,375,401,000 in the first quarter of 1941 to 132,028,605,000 in the comparable period of 1942 - an increase of 30.2 per cent.

The sharpest decrease in the number of cars used for l.c.l. merchandise occurred between May 1, the effective date of General Order No. 1, to June 20. During these eight weeks, l.c.l. required 777,981 cars as compared with 1,273,732 for the same weeks in 1941, a decrease of 495,751 cars or approximately 40 per cent, according to Mr. Eastman.

On at least sixty per cent of the 121 major railroads—the Class I systems—approximately 20 per cent of all merchandise car loads had already reached the 10-ton limit, and almost 50 per cent had attained the eight-ton loading, by the end of May, it was pointed out.

Roads Will Get Cars Authorized in 1942

(*Continued from page 26*)

for overseas use and there is a growing demand for Diesel engines for the smaller Naval vessels. It is possible that these war needs may take preference and further reduce the prospective 425 locomotives which we are expecting in 1942 and to be delivered after June 1st. We are presenting the picture continually to the WPB and the entire thing seems to boil down as to the most critical place to put the units to best serve the war effort.

"*Steel Requirements:* The following statement shows the net tons of steel used by the American railroads: 1929—8,162,560 tons; 1939—3,250,022 tons; 1940—4,019,219 tons; 1941—5,813,518 tons.

"The estimated requirements for 1942 are 6,613,113 tons and with the allocations that are made to date it looks as if it will not be possible for the railroads to get in excess of 4,500,000 tons.

"You will notice that in 1929 the American railroads used almost twice as much steel as they will be able to get in 1942, notwithstanding the fact that business being transported in 1942 in ton miles is much in excess of the volume of business handled in 1929."

The Electro-Motive Company is enlarging its facilities. Investigation by the *Railway Age* indicates that this enlargement of its facilities will be great enough to meet the demands of the Navy upon it for Diesel engines; that its production of locomotives for the railways will be interrupted during the last three months of this year, but that it will be able to resume

locomotive production after the end of the year.

To End Reduced Fares in Canada

Finance Minister J. L. Ilsley at Ottawa in his annual budget announced heavier taxation of railway travel, as well as other kinds of pleasure and necessary passenger transportation. On fares there is a rise in the tax from 10 to 15 per cent with the exemption limit raised from 50 to 75 cents; an increase from 10 to 15 per cent, with a minimum tax of 35 cents, on sleeping berths; and an increase from 10 to 15 per cent on parlor car seats.

T. C. Lockwood, transport controller, has issued an order cancelling and modifying on various dates the reduced rates or fares on a group of special rail services.

Special rates for agricultural exhibitions (fall fairs) and major exhibitions will be continued until next October 31 but no special trains may be operated for this class of traffic after July 31. Round-trip party fares will be modified by eliminating the reduced rates for groups of 15 to 24 persons and 25 or more persons and for circuit tours of 10 or more persons. After August 1, the minimum rates or fares to be charged for parties of 10 or more persons will be the same as those applicable at present to parties of 10 to 14 persons.

A considerable number of other special excursion fares are to be eliminated, as is also the provision for hauling an automobile at the rate for two passengers.

Kelly Succeeds Hollar at ODT; Latter Returns to A.A.R.

Warren W. Kelly, associate director of the Office of Defense Transportation's Section of Materials and Equipment, has been appointed director succeeding Philip A. Hollar who has been acting director since March. Mr. Hollar, who was formerly assistant stores manager of the Pennsylvania, has returned to the Association of American Railroads as special representative of the Operations and Maintenance Department, the position he was holding when he joined the ODT staff.

Mr. Kelly, former general purchasing agent of the Atchison, Topeka & Santa Fe, came to ODT last month, as noted in the *Railway Age* of June 20, page 1214, where his photograph and a sketch of his career were published.

Along with the foregoing, ODT announced the appointment of C. W. Brown as assistant director of the Section of Materials and Equipment. He has been with ODT since February, and was formerly associated with the federal coordinator of transportation.

Materials and Prices

Following are references to orders of interest to railroads issued by the War Production Board and the Office of Price Administration since June 18:

Auto-trucks—WPB ordered the production of commercial-type truck trailers for non-military use stopped, effective July 1. After the end of June, no manufacturer will be permitted to produce any truck trailers having a load-carrying capacity of 10,000 lb. or more, except for the Army and Navy, certain designated government agencies, governments of the United Nations and for deliveries under the Lend-Lease Act. Production of heavy-duty trucks for other than military uses ceased on May 31.

Metal containers—A revision of Conservation Order M-81, effective June 27, prohibits the manufacture or use of tinplate or terneplate cans for many chemicals, paints and other listed products. The order covers cans for all paint and related products, except shellac, lacquers, varnish removers, lacquer thinners and lacquer stains, which may use terneplate, but not tinplate. The order also prohibits cans for alcohol, cements, acetone, amyl acetate, sodium silicate, turpentine, phenols and benzols and glycerine. Cans smaller than a 10-lb. syrup can or an 8-lb. lard pail may not be made with handles.

Nickel scrap—Order M-6-c, covering nickel scrap, was amended June 19 to make it conform to the new alloy steel scrap segregation order, M-24-c. Nickel scrap does not include metal, the principal part of which is aluminum, nor metal containing over 40 per cent copper, these alloys being covered by orders M-1-d and M-9-b respectively. Ferrous nickel scrap must be segregated in the same manner as alloy steel scrap. The provision of the original order limiting the amount of scrap which may be melted in any month to 300 lb. nickel-content is removed. Any melter may receive nickel scrap to fill orders bearing preference ratings higher than A-2, without regard to primary nickel allocated to the order. Dealers must not melt nickel scrap without specific authorization.

Priorities—Priorities Regulation No. 11, which makes the use of the Production Requirements Plan mandatory for a large segment of industry, was amended June 23 to clarify the procedure to be followed by companies which have not yet received a PRP certificate, and also to redefine the permissible use of ratings by companies already operating under PRP. The regulation, as originally issued, permitted companies who had filed PRP applications before July 1, but had not yet received the certificates, to receive deliveries and apply preference ratings within certain limitations. The amendment makes this procedure available to any company which is not in default in filing its application, so as to permit the placing of purchase orders at any time before the deadline for filing the PRP applications, which may be extended beyond June 30. Another amendment allows companies which have been operating under PRP during the second quarter of 1942 to accept delivery of materials rated on their second quarter PRP certificate during the third quarter, if such delivery has been delayed, in addition to the materials which they are authorized to receive by their third quarter certificate. The regulation extends to railway manufacturers and manufacturing railroads.

Priority ratings—Priorities Regulation No. 12 and amendments to Priorities Regulations No. 1 and 3, issued June 27, provide for rerating war orders and for applying a new series of high preference ratings. The new ratings are AAA, AA-2, etc., all of which will take preference over A-1-a ratings. Heretofore the highest rating has been AA, which was permitted only by special authorization. This rating is now abolished, and all outstanding AA ratings are automatically changed to AA-2. The chief purpose of the rerating is to permit greater flexibility in the assignment of preference ratings to definite quantities of military and related non-military items, most of which have recently been either AA or in the A-1 series. It will permit use of top ratings for urgent war materials without seriously disturbing the pattern of ratings for other war and essential civilian orders. The new high ratings may be assigned either directly by the Director of Industry Operations or by appropriate officers of government war agencies expressly authorized to issue reratings. A separate form called a rerating certificate, PD-4Y, is provided for a manufacturer whose deliveries to a war agency have been rerated so that he may in turn rerate related deliveries to be made to him.

Prices

Castings—Amendment No. 2 to Revised Price Schedule No. 41, steel castings, effective June 25, permits foundries to apply for permission to charge buyers of steel castings abnormal freight costs on shipments of castings directly related to the war effort if such costs are occasioned by unusual circumstances, such as deliveries beyond the normal shipping area. Formerly, adjustable pricing was permissible only on contracts for steel castings where delivery was not required until six months or more after date of contract.

Crude oil—Amendment No. 19 to Revised Price Schedule No. 88, petroleum and petroleum products, made retroactive to February 2 maximum prices for crude oil in Ritchie Field, Acadia Parish, La. Amendment No. 7 established a maximum price of $1.48 a lb. for crude petroleum of 40 degrees A. P. I. gravity and above, with customary differentials for lower gravity crudes. Sun Oil Company, Continental Oil Company and three producers are affected by the amendments.

Ice—Provision for the adjustment of abnormally low ceiling prices was extended on June 22 to sales of ice made to the ultimate commercial or industrial user, which includes railroads. The extension was contained in Amendment No. 1 to Maximum Price Regulation No. 154, ice, and is effective June 25. The original price regulation for ice permitted an adjustment in maximum prices for sales to ultimate consumers, other than commercial or industrial users, in cases where such prices are abnormally low in relation to ceiling prices of others making sales at retail and where such prices result in substantial hardship.

Iron and steel—Amendment No. 6 to Revised Price Schedule No. 6, on iron and steel products, effective June 30, takes three steps to stabilize and make fair and reasonable the cost of iron and steel products to buyers. Producers of iron and steel products are directed to file data covering conversion and processing charges to determine whether such charges are fair and reasonable and whether any future regulation of them is necessary. Uniform rules for the application of extras and other charges on cold finished steel bars and shafting were issued to clarify such charges and eliminate the possibility of several overlapping extras on the same product. Conditions under which producers of concrete reinforcing bars are required to give discounts were defined. An extra of 10 cents per cwt. for magnetic testing of cold bars may be charged only when the specification expressly calls for magnetic testing, or when magnetic testing is necessary. The extra of 25 cents per cwt. for physical inspection or testing may be charged only when the steel is produced to definite physical specifications requiring tensile, impact, fracture or similar tests. The extra of 10 cents for chemical inspection or testing is eliminated. The extra of 15 cents for extensometer testing may not be charged when the extra of 25 cents for physical testing is charged. Extras for quality may be charged only when and in the amount that such extra has been charged by the producer of the hot rolled steel from which the cold finished steel is made. In the case of producers making both hot rolled and cold finished bars, such extras may be charged only when properly applicable to the hot rolled bars.

L. C. L. sales—Selling of iron and steel products in quantities just under carload weight to obtain higher prices permitted for less-than-carload shipments is an evasion of Revised Price Schedule No. 49 on such products, it was announced on June 24. Revised Price Schedule No. 49 provides that mill carload prices shall be charged for straight carloads sold out of warehouse stock. The schedule establishes 40,000 lb. as a minimum carload shipment on iron and steel products with the exception of rails, where a minimum carload lot is 56,000 lb.

Rubber—Revised Price Schedule No. 87, as amended June 27, brings prices to consumers for all kinds of scrap rubber into line with the maximums already established on tires, tire parts and tubes. The ceiling order in no way affects either Rubber Reserve Company's offer to buy scrap tires and miscellaneous scrap rubber at $25 a ton in carload lots at any shipping point in the country, or the price paid to individuals by filling stations and other collection agents in the national campaign. By relating the maximum prices that reclaimers and other consumers may pay for all scrap to the prices that prevailed for tire and tube scrap in the final quarter of 1941, this extension of the price ceiling, together with the government's program for scrap rubber collection, is designed to facilitate reclamation of substantial amounts of the nation's scrap supplies.

Services—Maximum Price Regulation No. 165, consumer service, effective July 1, transfers all consumer services connected with commodities from the general maximum price regulation and places them under a separate ceiling with special provisions to meet the price control problems involved.

Typewriters—Rental of typewriters under schemes which permit the seller to collect the full sales price of a machine at the outset of the transaction or to accept payment in installments are in violation of typewriter rationing regulations, according to a ruling announced June 25.

GENERAL NEWS

RRs Preparing 20 Yrs. for This War

Fitzgerald tells Pacific N. W. Board how carriers planned to serve nation in crisis

The freight car supply is at present adequate in all parts of the country, according to R. E. Clark, assistant to the chairman of the Car Service division of the Association of American Railroads, before the fifty-first regular meeting of the Pacific Northwest Advisory Board at Seattle, Wash., on June 26. New cars placed in service, a reduction in the number of cars in need of repairs, heavier loading, faster turn-around, and recent Office of Defense Transportation orders affecting short hauls and l. c. l. movements have resulted in a substantial increase in the available car supply, he said.

Carloadings in Oregon, Washington, and northern Idaho for the third quarter of 1942 will be 5.1 per cent above the level in the same period last year, forecasts of commodity committees indicated. A total of 259,426 freight cars will be required to handle the traffic in this territory in the third quarter, compared with 272,536 cars actually loaded in the third quarter of last year.

Modern war depends solely on mass production and transportation, and in both fields America holds supremacy, John W. Fitzgerald, vice-chairman of the Eastern Railroad Presidents' Conference, Committee on Public Relations, declared at a luncheon meeting. Pointing out that the railroads have been preparing for the needs of national defense and war for 20 years, spending more than 10 billion dollars since 1921 for equipment and expansion, he said that "today we have better railroads, better railroading, and better railroad service than at any time in railroad history."

"The rail carriers are meeting every peak transportation load without major car shortage or serious congestion, and they are giving the traffic the fastest and safest service in history. At the same time, civilian transport needs are getting highly satisfactory service—particularly when we consider the demands of war."

Although the railroads were commended for moving 600,000 troops and equipment in the few weeks following Pearl Harbor, this was only a part of the story, according to Mr. Fitzgerald, who revealed that in the first three months of this year the railroads moved almost as many troops as were moved in the first eight months of World War 1.

Tribute to the work of the Shippers' Advisory Boards, through which shippers and receivers of freight have cooperated with the railroads to secure maximum service from every freight car, was paid by Mr. Fitzgerald, who called their efforts "constructive cooperation of the highest order never surpassed by an industry anywhere."

Factors necessary to continue the present high standards of efficiency of transportation to meet war time demands were listed by Mr. Fitzgerald as:

First, continued cooperation of the various departments of the government and of the shipping and traveling public.

Second, thoughtful consideration of all users of freight and passenger service. In this connection Mr. Fitzgerald pointed out that failure to receive empty cars at a given time will not mean that there is a car shortage—the government many suddenly decide to use the cars for preferred traffic. Failure to secure a seat or berth on a passenger train will not mean that the railroads have quit—troops may be moving or governmental officers may be traveling on the business of war.

Third, materials and supplies necessary to maintain the railroad plant and equipment at highest possible standards must be made available.

$1.25 Per Diem for Use of Cars in Mexico

The per diem rate for use in Mexico of freight cars owned by United States and Canadian railroads and by Mexican roads which are "non-resident corporations" will be increased from $1.15 to $1.25 on July 1. The increase is in accordance with a vote of Association of American Railroads member roads, taken as a result of the increase in Mexican income taxes which became effective December 31, 1941.

P. R. R. Tries Horse and Wagon Pick-up Service

Faced with the possibility that motor trucks may not be available indefinitely, the Pennsylvania has begun to use some horse-drawn vehicles in local cartage service in the Philadelphia area. As more horses become available the number of these vehicles will be increased. Railroad officers explained the step is a part of their preparations to maintain essential service in the face of shortages in rubber and gasoline.

The substitution of horse-drawn for motor vehicles is being studied throughout the system to determine what adjustments and changes would be necessary to adapt the pick-up and delivery service generally to horse-drawn transport. Surveys are also being undertaken to determine the availability of horses, mules, carts and harness. Inquiry has been made of government officials as to the possibility of importing draft animals from Canada and Mexico in the event that more are needed than are available in this country.

Pullman Trial Testimony Ends

Competitors testify on process of developing lightweight passenger cars

Examination of witnesses in the Department of Justice anti-trust suit against the Pullman companies has been completed. The last direct testimony was introduced on June 30, and cross-examination and surrebuttal followed on that day and July 1.

J. F. MacEnulty, president of the Pressed Steel Car Co., was the last witness for the defense. He stated that his company had not solicited orders for lightweight passenger cars when they were first introduced because standard designing practices had not been developed and definite specifications had not been set up. After A. A. R. specifications were formulated, Pressed Steel Car did enter into competition with other builders and secured orders. This policy was decided on because his company preferred to let others bear the expense of research and development incident to pioneering in a new field. In 1906 and thereafter Pressed Steel Car had engaged in extensive and expensive pioneer work which led to the introduction of all-steel passenger cars, while competitors kept on building wooden cars. After this pioneer work was finished the other companies entered the field and took orders for cars following specifications developed by his company, so when the lightweight car was introduced he decided to let others bear the costs of research and development. In the opinion of the witness Pullman-Standard's connection with Pullman as a sleeping car operator gives it no advantage in competition with Pressed Steel Car for passenger car orders.

Two witnesses were introduced by the Department of Justice on June 30. Dr. Irston R. Barnes of the Department's permanent staff appeared as an expert on accounting theory and practice, and through him were presented a number of tables and graphs based on financial statements and reports. These indicated, he said, that in the period from 1867 to 1899 Pullman reinvested in the business on the average 42 per cent of the annual net earnings; between 1900 and 1919, 26 per cent; and between 1920 and 1930, 22 per cent. In the period from 1930 to 1940 dividends paid exceeded net earnings, so there was no net reinvestment. As compared with results of railroad passenger operations, Pullman's situation was favorable, in his opinion. In the period 1914-1924 Pullman's depreciation charges were sufficient to care for all cap-

(*Continued on page 36*)

Firemen Propose Pay Base Change

Would eliminate differentials and figure pay on engine weight or horsepower

A joint meeting in New York last week between committees representing the Brotherhood of Locomotive Firemen & Enginemen and the Eastern railroads considered the union's proposal for a revised basis for wage rates. The meeting was adjourned to July 14, when the discussion will be continued.

The union demands are the same as were presented in May, 1941, as far as general terms go, but are now based on the pay scale effective since December, 1941 (when an increase of 76 cents per day was allowed), instead of the scale in effect in May, 1941, and in that respect represent an increase over what was asked last year at the beginning of the wage negotiations.

One provision in the union proposal would establish a uniform rate of pay for the same class of work in all parts of the country, doing away with the differential between the East, the Southeast and the West that has been in effect. From January 1, 1919, until 1927 the rates paid enginemen and firemen were uniform throughout the United States for the same class of work, but by the wage agreements made in that year enginemen in the East were given a daily rate of six to nine cents above the comparable rates in the Southeast and the West. Rates established in 1927 for firemen also varied by sections; a few classes were paid one or two cents a day less in the East than in the Southeast, but for most classes the rate in the East exceeded that allowed in the West and Southeast, the greatest difference amounting to 15 cents a day. Subsequent wage adjustments have retained this differential. The present proposal would put all employees represented by this union on a nationally uniform wage basis; that is, the highest rate for each individual class now effective in any section of the country would apply to that class nationally.

Another proposal would require a helper, paid as a fireman, on every Diesel-electric locomotive, regardless of size. Actually this would affect only Diesels under 90,000 lb. weight on drivers, as a helper is required on heavier units by the existing agreements.

Certain existing differentials between firemen on coal-burning and oil-burning locomotives in road service would be wiped out by another union proposal. Such differentials were established before 1915. Where they are effective, the fireman of a coal-burning locomotive is now paid varying amounts up to 20 cents a day more than the fireman on an oil-burner of equivalent weight. The wage rate covering firemen on oil-burners in the West, then, would be increased in two ways by the present proposal; first, by eliminating the differential between oil-burners and coal-burners, and second, by eliminating the differential between the West and the East.

Still another change proposed by the union would set up an alternate basic wage scale for helpers on Diesel-electric locomotives, to be based on horsepower rather than on weight on drivers, as at present. The railroad would then be required to determine for each class of locomotive which basis of pay—weight on drivers or horsepower—would yield the greater wage under actual operating conditions, and to pay that wage to the individual helpers. In general, though not in all cases, the daily rate on the horsepower basis would exceed that on the weight-on-drivers basis, and in through freight service with 5,400 hp. Diesels the difference might amount to as much as 71 cents a day.

A similar "saving clause" would apply in connection with the union's proposed new alternate basis for calculating the wage rate for steam locomotive firemen, that is, using total locomotive weight instead of weight on drivers, provided the individual wage is greater thereunder. In many instances no change in rate would result from this proposal, as the present basis would yield a higher daily figure than the new basis, but large differences are possible in cases where there is a relatively small proportion of the total locomotive weight on the drivers.

Estimates of the probable costs to the railroads of these proposed wage adjustments are not at present available, as the effect of the alternate basis plan of calculating individual rates would first have to be determined for thousands of cases. It is expected that this situation will be explored more fully when discussions are resumed July 14.

Pacific Railway Club to Discuss Transportation for War Workers

Transportation for war workers will be the subject for discussion at a meeting of the Pacific Railway Club at San Francisco, Cal., on July 9, in keeping with the Club's policy of presenting programs that will aid railroad men in their war efforts. R. L. Riley, member of the Railroad Commission of California, which has completed a survey of war worker needs and problems, will present the subject. Discussion will be by a panel consisting of Walter Haluk, employee transportation co-ordinator for the shipyards; L. C. Ioas, assistant to the vice-president of the Southern Pacific; Leonard V. Newton, vice-president of the Market Street Railway Company; and Alfred J. Lundberg, president of the Key System and East Bay Transit Company.

5 Mo. Net Income Was 211 Million

Net railway operating income for same period was $432,926,692

Class I railroads in the first five months of this year had an estimated net income, after interest and rentals, of $211,500,000, as compared with $119,435,615 in the corresponding period last year, according to the Bureau of Railway Economics of the Association of American Railroads. The five-months net railway operating income, before interest and rentals, was $432,926,692, compared with $340,467,042 in the first five months of 1941. The rate of return for the 12 months ended May 31 averaged 4.14 per cent, compared with 3.13 per cent for the 12 months ended May 31, 1941.

May's estimated net income was $63,600,000, compared with $43,137,083 in May, 1941; while the net railway operating income for that month was $109,628,364, compared with $88,104,433 in May, 1941.

Total operating revenues in the five months amounted to $2,657,010,291, compared with $1,969,286,695 in the same period in 1941, or an increase of 34.9 per cent. Operating expenses amounted to $1,778,782,474, compared with $1,379,374,356, or an increase of 29 per cent.

Class I roads in five months paid $377,764,198 in taxes, compared with $195,798,249 in the same period in 1941. For May alone, the tax bill amounted to $100,180,614, an increase of $53,870,596 or 116.3 per cent above May, 1941. Twenty-one Class I roads failed to earn interest and rentals in the five months, of which one was in the Eastern district, one in the Southern district, and 11 in the Western district.

Gross for May totaled $601,001,598 compared with $442,285,876 in May, 1941, while operating expenses totaled $375,439,983 compared with $296,590,475 in the same month in 1941.

Class I roads in the Eastern district in the five months had an estimated net income of $94,800,000 compared with $85,149,149 in the same period last year. Those same roads in the five months had a net railway operating income of $182,435,999, compared with $176,515,765 in the same period in 1941.

Operating revenues in the Eastern district in the five months totaled $1,281,708,915, an increase of 29.4 per cent compared with the same period in 1941, while oper-

CLASS I RAILROADS—UNITED STATES

Month of May

	1942	1941
Total operating revenues	$601,001,598	$442,285,876
Total operating expenses	375,439,983	296,590,475
Operating ratio—per cent	62.47	67.06
Taxes	100,180,614	46,310,081
Net railway operating income (earnings before charges)	109,628,364	88,104,433
Net income, after charges (estimated)	63,600,000	43,137,083
Five Months Ended May 31		
Total operating revenues	$2,657,010,291	$1,969,286,695
Total operating expenses	1,778,782,474	1,379,374,356
Operating ratio—per cent	66.95	70.04
Taxes	377,764,198	195,798,249
Net railway operating income (earnings before charges)	432,926,692	340,467,042
Net income, after charges (estimated)	211,500,000	119,435,615

ating expenses totaled $870,755,337, an increase of 27.6 per cent.

Class I roads in the Eastern district for May had an estimated net income of $29,100,000 compared with $28,657,930 in May, 1941. Net railway operating income in May amounted to $46,881,957 compared with $47,060,944 in May, 1941.

Class I roads in the Southern district in the five months had an estimated net income of $45,300,000 compared with $27,549,558 in the same period last year. Those same roads in the five months had a net railway operating income of $73,623,497 compared with $55,787,366 in the same period of 1941.

The five-months gross in the Southern district totaled $379,222,681, an increase of 39.5 per cent compared with the same period in 1941, while operating expenses totaled $240,277,248, an increase of 30.8 per cent above 1941.

In the Southern district for May the estimated net income was $12,400,000 compared with $5,642,009 in May, 1941. Net railway operating income in May amounted to $18,462,144 compared with $11,572,705 in May, 1941.

Class I roads in the Western district in the five months had an estimated net income of $71,400,000, compared with $6,736,908 in the same period last year. Those same roads in the five months had a net railway operating income of $176,867,196, compared with $108,163,911 in the same period in 1941.

Operating revenues in the Western district in the five months totaled $996,078,695, an increase of 40.9 per cent compared with the same period in 1941, while operating expenses totaled $667,749,889, an increase of 30.1 per cent above 1941.

In the Western district for May the estimated net income was $22,100,000, compared with $8,837,144 in May, 1941. Net railway operating income in May amounted to $44,284,263 compared with $29,470,784 in May, 1941.

Films to Train Employees Doing Aluminum Work

Prepared especially for use in the training of new men who must be taught the assembly or repair of aluminum parts and equipment, a series of three non-technical films is now available to employers from the Aluminum Company of America. These films depict three separate classes of work performed on aluminum. One film is devoted to welding, the second to riveting and the third to the machining of aluminum and aluminum alloys.

The welding film shows recommended procedures for oxy-acetylene, oxy-hydrogen and electric arc welding; it also illustrates proper set-ups and operations for production welding, using machine and brazing processes. The second film of the series covers the essentials in obtaining properly riveted joints. Machining, choice of tools, proper speeds and feeds, tool preparation —especially rake and relief angles—and the use of cutting oils are dealt with in the other film of the series. The information concerning tool preparation indicates that tool dressing must be such as to give the finest of cutting edges and the smoothest of finishes to any tool used on aluminum. In general, rake and relief angles are greater than those used on tools for cutting ordinary machining steels.

The films are distributed in 16 mm. and 35 mm. sizes through the Aluminum Company offices in Pittsburgh, and the 16 mm. size is also available at the Bureau of Mines, Washington, D. C. The pictures were produced by the Jam Handy Organization, New York.

Transport Board's Life Extended Two Years

Acting under the authority given him in that connection, President Roosevelt on June 26 issued a proclamation extending for two years - until September 18, 1944—the life of the Board of Investigation and Research created by the Transportation Act of 1940. Under the act the Board was given a two-year life from the law's enactment date (September 18, 1940, but the President was authorized to grant a further extension of not to exceed two years.

The Presidential proclamation noted that the Board did not assume office until August 22, 1941 (nearly a year after the enactment date), and went on to say that it appears that the Board's duties "cannot be adequately performed" unless a two-year extension is granted. Another "whereas" asserted that "an efficient transportation system is essential to the nation in peace and war, and the national interest requires the development of informed policies by which such a system may be promoted, strengthened and maintained."

Representation-of-Employees Cases

The National Mediation Board has announced the result of voting in several representation-of-employees cases.

On the East St. Louis Junction the power house employees and railway shop laborers voted to have the International Brotherhood of Firemen, Oilers, Helpers, Roundhouse and Railway Shop Laborers, operating through the Railway Employees' Department, A. F. of L., represent them for the purposes of the Railway Labor Act.

On the Nashville, Chattanooga & St. Louis the red caps chose the Brotherhood of Railway Clerks, as their representative.

In another election on the Chicago, Aurora & Elgin the Brotherhood of Railroad Trainmen won the right to represent the conductors and trainmen (collectors, brakemen and flagmen); while the Brotherhood of Locomotive Firemen & Enginemen were chosen to represent the motormen.

At the Denver Union Stock Yard the Brotherhood of Railway Clerks has been designated to represent the clerical, office, station and storehouse employees (including stock yard employees).

As a result of an election at the LaSalle Street Station, Chicago, Ill., the Board has certified that the International Brotherhood of Firemen, Oilers, Helpers, Round House and Railway Shop Laborers, operating through the Railway Employees' Department, A. F. of L., has been chosen to represent the power house employees and railway shop laborers (including building pumpers).

The Board has also announced that at the Fort Street Union Depot in Detroit, Mich., the yardmen (foremen, helpers and switchtenders) have voted to retain as their representative the Brotherhood of Railroad Trainmen.

T. P. & W. Wage Hearing Postponed to July 2

The hearing on the wage and rule dispute of the Toledo, Peoria & Western, which was scheduled for June 29 at Chicago before Justice Benjamin C. Hilliard, was postponed to July 2 because an automobile accident on June 26 prevented George Voelkner, assistant federal manager of the railroad, from attending. It is understood that the federal manager and the brotherhoods, since the hearing at Chicago on June 10, have agreed upon higher wages and the application of rules but have not determined to what date they should be retroactive. The brotherhoods are endeavoring to make the new wages and rules retroactive to the time of the dispute but the federal manager is confronted with the legality of making them retroactive to a date prior to March 21, 1942, when the government took over the railroad.

Utility Loader Demonstrated in Washington

A picture demonstration of its utility loader was held in the Interstate Commerce Commission building at Washington, D. C., by the Evans Products Company on July 25. In attendance were representatives of the National Industrial Traffic League and the Interstate Commerce Commission; officers of the Office of Defense Transportation, the Bureau of Industrial Conservation of the War Production Board, the Association of American Railroads, and of the Board of Investigation and Research, and transportation representatives of the Army and the Navy. The demonstration, held for the purpose of studying the utility loader in relation to war traffic, was conducted by Col. E. S. Evans, president of the company manufacturing the device. The loader was described in the July 12, 1941, issue of the *Railway Age*, page 59.

Aitchison Named I.C.C. Chairman

Commissioner Clyde B. Aitchison, who has been acting chairman of the Interstate Commerce Commission since January, has been elected chairman for the balance of the year. Mr. Aitchison became acting chairman when Joseph B. Eastman was relieved of the duties of the chairmanship to become director of the Office of Defense Transportation; his election to the chairmanship came with the expiration of Mr. Eastman's term on June 30.

Mr. Aitchison's present term on the commission expires December 31. He was first appointed by President Wilson in September, 1917, and took his oath of office on October 5, 1917. Thus on October 5 next

he will have served 25 years. In the latter connection I. C. C. Secretary W. P. Bartel's announcement of Mr. Aitchison's election to the chairmanship said that "no member now serving on any regulatory body has served as long a period of time as Commissioner Aitchison has served as a member of the Interstate Commerce Commission."

Report Finds P.R.R. Liable for Some Pennroad Stock Losses

If the report of a special investigating committee is accepted by Judge George A. Welsh, of the Federal District Court at Philadelphia, the Pennsylvania will become further liable to the extent of about $10,500,000 for losses allegedly incurred by the Pennroad Corporation in security transactions.

During the winter, as reported in the *Railway Age* of February 28, page 459, this court ruled (in the course of a long-pending stockholders' suit of which the present action is a part) that the railroad is liable in the amount of approximately $4,000,000 on account of losses said to have resulted from Pennroad's investment in the National Freight Forwarding Co. Subsequently, a committee of three specialists in investment and security values—Edward Hopkinson, Jr., of Philadelphia, Patrick B. McGinnis, of New York, and John E. Oldham, of Boston—was appointed by the court to determine whether or not the prices paid by Pennroad for certain of its investments in railroad securities were fair. The report, presented on June 26 to the court, embodies the conclusions of the committee on these points.

Transactions in the stocks of seven railroads are reviewed in the report. The prices paid by Pennroad for its investments in the stocks of the Lehigh Valley, Seaboard Air Line, New York, New Haven & Hartford, and Detroit, Toledo & Ironton, the committee found to be fair, in view of conditions existing at the time, and any losses resulting were, in its view, due to general economic changes. Therefore, the Pennsylvania is not to be held liable for these losses. The committee concludes, however, that excessive prices were paid for the stock of the Pittsburgh & West Virginia, and for some of the stock of the Boston & Maine which Pennroad bought, and the report proposes that the court hold the railroad liable for the excess amounts.

In the committee's "hindsight" judgment, Pennroad between 1929 and 1931 paid $1,271,983 too much for its Boston & Maine stocks, and $9,140,130 too much for its purchase, in 1929, of 222,930 shares of Pittsburgh & West Virginia common.

With respect to Pennroad's investment in the Canton Company, a Baltimore terminal property, the committee claimed that it was not qualified to pass on the value of the large amount of industrial real estate involved, and reported this investment back to the court with the suggestion that a "possible solution" might be for the Pennsylvania to purchase this stock from Pennroad at cost, i. e., $13,432,817.

After the members of the committee had been questioned by counsel representing both sides the court set August 19 to hear legal arguments. While this committee report is not binding upon the court, Judge Welsh has already ruled that Pennroad directors, who were also Pennsylvania directors, acted partly for the benefit of the railroad in investing Pennroad's funds, and that the railroad is liable for any amount by which the prices paid for Pennroad's investments exceeded fair prices. The decision of the District Court is subject to appeal to the Circuit Court of Appeals and finally to the United States Supreme Court.

Equipment Depreciation Orders

Equipment depreciation rates for five railroads including the Missouri Pacific have been prescribed by the Interstate Commerce Commission in a new series of sub-orders and modifications of previous sub-orders in No. 15100, Depreciation Charges of Steam Railroad Companies.

Rates prescribed for the Missouri Pacific are as follows: Steam locomotives, 3.47 per cent; streamlined Diesel passenger locomotives, 6.18 per cent; other locomotives, 3.93 per cent; freight-train cars, 3.97 per cent; lightweight streamlined passenger-train cars, 3.98 per cent; other passenger-train cars, 3 per cent; work equipment, owned, 3.65 per cent; work equipment, leased, 4.7 per cent; miscellaneous equipment, 10.98 per cent.

Freight Car Loading

Loading of revenue freight for the week ended June 27 totaled 853,441 cars, the Association of American Railroads announced on July 2. This was an increase of 8,528 cars or one per cent above the preceding week, a decrease of 55,163 cars or 6.1 per cent below the corresponding week in 1941, and an increase of 100,794 cars, or 13.4 per cent above the same week in 1940.

As reported in last week's issue, loadings of revenue freight for the week ended June 20 totaled 844,913 cars, and the summary for that week, compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For Week Ended Saturday, June 20

District	1942	1941	1940
Eastern	158,319	189,891	154,712
Allegheny	186,099	196,087	155,310
Pocahontas	56,831	58,502	48,387
Southern	123,453	119,887	97,665
Northwestern	137,810	138,918	121,644
Central Western	117,882	126,637	106,359
Southwestern	64,519	55,617	44,416
Total Western Districts	320,211	321,172	272,419
Total All Roads	844,913	885,539	728,493
Commodities			
Grain and grain products	38,946	46,574	33,656
Livestock	11,031	9,089	10,553
Coal	164,500	161,122	123,657
Coke	14,309	13,558	10,605
Forest products	49,970	43,555	34,236
Ore	92,264	75,651	68,242
Merchandise l.c.l.	94,075	159,765	148,782
Miscellaneous	379,818	376,225	298,762
June 20	844,913	885,539	728,493
June 13	832,726	862,974	712,921
June 6	854,689	652,940	702,892
May 30	795,756	801,783	639,120
May 23	837,748	866,027	687,480
Cumulative Total, 25 Weeks	20,206,564	18,942,128	16,161,888

In Canada.—Carloadings for the week ended June 20 totaled 66,121, as compared with 65,388 in the previous week and 64,889 in the corresponding week last year, according to the tabulation of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Total for Canada:		
June 20, 1942	66,121	34,630
June 13, 1942	65,388	33,649
June 6, 1942	67,539	31,341
June 21, 1941	64,889	31,058
Cumulative Totals for Canada:		
June 20, 1942	1,571,863	802,718
June 21, 1941	1,431,248	727,785
June 22, 1940	1,243,137	613,303

Approve Liquid Reserve for Deferred Maintenance

An Interstate Commerce Commission proposal to set up a liquid reserve for deferred maintenance was approved by the general committee of the Accounting Division of the Finance, Accounting, Taxation and Valuation Department of the Association of American Railroads at a meeting in Chicago on June 25. Following approval, the subject was referred to the Contact committee which, with the Interstate Commerce Commission and the House Ways and Means committee, will consummate the plan. Under the proposal, an equitable monthly proportion of the difference between the budgeted or estimated expenses and the actual expenses chargeable to maintenance of equipment and maintenance of way and structures would be placed in a cash reserve or invested in government bonds and be used later when deferred maintenance can be made up. The proposal was made in order to enable the railroads to set aside funds for ordinary maintenance which cannot be undertaken or completed now because of priorities on materials.

Truck Proportionals and Contract Charges on Forwarder Shipments

The Interstate Commerce Commission has discontinued various proceedings wherein it was investigating proportional rates of common carrier truck lines and charges made by contract truckers on forwarder shipments. The action follows the recent enactment by Congress of the Interstate Commerce Act's Part IV for the regulation of forwarders.

The proceedings discontinued include I. & S. No. 4793, I. & S. No. M-1083, I. & S. No. M-1084, and No. 28496. All of the orders but that involving I. & S. No. 4793 included the following statement:

"The commission hereby expresses the view that during the adjustment period referred to in section 409 (a) of Part IV of the Act, it will be improper for motor common carriers to maintain proportional rates which are really assembling or distribution rates applicable to transportation constituting part of a through movement to which joint forwarder-motor rates are concurrently applicable, and that such 'proportionals' or assembling or distribution rates should promptly be canceled or restricted so as not to apply to transportation as described, and thus avoid having two sets of rates governing transactions.

"The commission also directs the attention of freight forwarders and motor contract carriers to section 418 of Part IV, which prohibits the use by the forwarders

of the instrumentalities or services of contract carriers except for the performance of transfer, collection, or delivery services within terminal areas under penalties provided by section 421 of Part IV, with the admonition that contract carrier schedules containing charges which may be applied to forwarder traffic of the kind indicated should promptly be canceled or restricted so as not to have such application."

Pullman Trial Testimony Ends

(Continued from page 32)

ital additions, but in the next five-year period the situation was reversed, and some 35½ million dollars from other sources was invested in addition to depreciation charges. The witness stated his belief that a policy of collecting depreciation charges more rapidly than the property exhausts its useful service results in a distorted statement of profits and expenses and because of the compounding of interest results in financial advantage to Pullman.

Colonel E. J. W. Ragsdale, chief engineer of the Stainless Steel division of the Edward G. Budd Manufacturing Co., was the next witness. He outlined the development of structural applications of stainless steel in passenger car manufacture and described the Shotweld process. Other questions led to an explanation of novel, patented features in the interior arrangement of sleepers built by Budd for the Santa Fe and Burlington. Remarking that the Santa Fe cars are interchangeable with standard equipment, though the Burlington cars are not, he stated that Budd could have built interchangeable cars at any time.

The witness then explained that the center sill construction of passenger cars was derived from the wood buffer pole slung under stage coaches when they were coupled together. The articulated cars of the Pioneer Zephyr have no center sills, he pointed out, as the floor structure has been designed to serve the same purpose, but Budd cars built for interchange do have center sills, and comply fully with A. A. R. specifications, though he personally is convinced that proper floor structure can and should be as safe and strong as the center sill construction.

The Altoona tests of lightweight car construction referred to by previous witnesses were described by Col. Ragsdale, and he then explained how Budd built and uses a machine for testing the structural strength of cars which in his opinion gives more exact results.

Cross-examination of this witness was largely concerned with certain service failures of stainless steel bolsters, which, he explained, were due to faulty design calculations, and not to material defects. They had developed, he added, only on cars with dropped center sills, not where the sill was built into the floor structure.

Testimony in this case began in November, 1941, and was reported in *Railway Age* at that time. After adjournment from November 19 the trial was resumed June 1, and accounts of its progress since then have appeared week by week in these pages. It is expected that briefs of counsel will be filed during the fall, and oral argument will follow later, probably not before next year.

War Spurs Railroad Building In Unoccupied China

Current reports from China indicate that railroads are coming to parts of that country which had never known any form of transportation more advanced than donkeys or camel trains. Scenes of pioneer railroading are taking place today in China's "Wild West"—a primitive country of high mountains and wide deserts.

Five years of war have caused extensive destruction in China, but, ironically, the war has served to start development of natural resources and construction of new industries on a scale far greater than would normally have taken place. Railroads are recognized as an integral part of this program for industrialization. Large mineral deposits are found in China's West, and it is to exploit this untouched natural wealth, and to create in the interior a strong base for national resistance and post-war reconstruction, that China is building new railroads under tremendous handicaps.

Two-thirds of the country's pre-war railroad mileage was seized by Japan within six months after the start of the war, but today the mileage inside unoccupied China is reported to exceed that of all pre-war China.

Light rails made from native steel are being turned out by new plants recently established in the interior, but it is a phenomenon of China's present railroad construction that much of the railroad stock, rail and ties have been stolen from occupied territory. Railroad construction workers, disguised as farmers, have been smuggled by night through the lines to co-operate with Chinese guerrillas in special destruction jobs. The guerrillas, moving systematically from one locality to another, have dynamited long stretches of track, derailing troop trains and confiscating supplies. Then, before the Japanese could be organized to take charge of the wreckage, the Chinese railroad workers removed rails and equipment to protected hiding places. A recent example of this activity is seen in the 400-mile Chekiang-Kiangsi railroad, an objective for which the Japanese fought desperately, only to find each section thoroughly destroyed when it was attained.

* * *

How B. & O. Women Employees Keep Up-to-Date

The B. & O. Magazine is publishing an all-pictorial issue, featuring the important part the ladies play in running the railroad and in making homes for the men so engaged. The above photograph shows three alert employees who are heads of transportation organizations. Left to right they are: Mary Thomas Rogers (secretary to superintendent car service), president, Baltimore Women's Traffic Club; Mildred Dreschler, president, Women's Co-operative Traffic Program; Ann E. Clark, president, B & O. Women's Music Club.

Truck Freight Volume in May Up 2.6 Per Cent Over 1941

The volume of freight transported by motor carriers in May decreased three per cent under April, but represented an increase of 2.6 per cent as compared with May, 1941, according to American Trucking Associations, Inc.

Comparable reports were received by A. T. A. from 217 motor carriers in 40 states. The reporting carriers transported an aggregate of 1,621,662 tons in May, as against 1,671,585 tons in April, and 1,580,213 tons in May, 1941. The A. T. A. index figure, computed on the basis of the average monthly tonnage of the reporting carriers for the three-year period of 1938-1940 as representing 100, was 162.59 for May.

A little more than 82 per cent of all tonnage transported in the month was reported by carriers of general freight. The volume in this category decreased 3.8 per cent under April, and 0.8 per cent under May of last year. Transporters of petroleum products, accounting for about 13½ per cent of the total tonnage reported, showed an increase of 2.6 per cent over April, and an increase of 73.3 per cent over May, 1941. Movement of new automobiles and trucks, which virtually has been discontinued, represented only 0.1 per cent of all the tonnage reported. The tonnage in this class de-

creased 11.5 per cent under April, and dropped 93.5 per cent under May of last year. Haulers of iron and steel products reported about 1½ per cent of the total tonnage. The volume of these commodities showed a decrease of 10.9 per cent under April, and a decrease of 19.1 per cent under May, 1941. Slightly more than 2½ per cent of the total tonnage reported was miscellaneous commodities, including tobacco, milk, textile products, bricks, building materials, cement and household goods. Tonnage in this class showed a slight increase of 0.6 per cent over April, but decreased 8.8 per cent under May of last year.

Commission Approves G. M. & O. Motor Carrier Merger

Division 4 of the Interstate Commerce Commission has authorized the merger of the operating rights and properties of the Mobile & Ohio Transportation Company, the Mobile & Ohio Transportation Company of Illinois, and the St. Louis, Red Bud & Chester Motorbus & Service Corporation into the Gulf Transport Company. At the same time the Gulf Transport Company was authorized to purchase the operating rights of the Gulf, Mobile & Ohio.

"The proposed plan," says the commission decision, "is similar to others approved by us wherein carriers by railroad have merged their motor subsidiaries into single companies without substantial change in their approved coordinated rail-motor operations to effectuate corporate simplification and greater efficiency and economy. The motor carrier applicants have been under control of the Gulf, Mobile & Ohio and its predecessors, directly or indirectly, since prior to the enactment of the Motor Carrier Act, 1935, or came under such control upon meeting the proof required by the Act."

American Locomotive Reopens Chicago Heights Plant

The American Locomotive Company is delivering tanks and guns "many times ahead of contract quotas" and is ahead of schedule on all war contracts, W. C. Dickerman, chairman of the board, declared on June 29, at a ceremony reopening the company's Chicago Heights, Ill., plant. Duncan W. Fraser, president, also spoke at the dedication, stating that musicians, school teachers, bakers, barbers, and automobile salesmen who never worked in a steel plant before, have been hired at this plant and are being successfully trained for war production.

The plant, with the exception of its spring shop, was closed 10 years ago and a $1,645,000 rehabilitation program was started about a year ago. One open hearth furnace, the first of three, was placed in operation on March 24.

"All of American Locomotive Company plants are devoted 100 per cent to war or war-related production," Mr. Dickerman said. "Substantially all operations are on a three shift, seven day week basis, and, counting shipments of locomotives and railroad supplies, we are providing for virtually every one of the united nations. Our backlog of orders is more than $530,000,000 and deliveries of war goods for the first half of 1942, were more than four times our war deliveries in the corresponding period of 1941."

Mr. Fraser, in discussing the problem of finding workers for the reopened plant, said, "Contrary to experience at most of our plants, we have been forced to recruit men from all walks of life and train them to jobs which they never before had undertaken. Of our 650 employees, about 50 per cent have never worked in a steel plant before."

Mr. Fraser said that the company is conducting research experiments, "which we hope will give us and the community important work to do after the war so that the plant can continue in operation. We are not of the belief that the artificial demands of war must inevitably leave industry idle when the battalions halt. Industry, by applying a fraction of the imagination and vigor it has shown in tooling up for war, should be able to whip any peacetime stalemate."

Furniture Industry to Consult with ODT and WPB

A committee to consult with the Office of Defense Transportation and the War Production Board on transportation matters relating to the furniture industry has been appointed by W. A. Adams, chief of WPB's Furniture Industry Branch. The group will work with the over-all WPB Transportation Committee in advising the branch on methods of meeting transportation problems, and in keeping the industry abreast of ODT regulations affecting furniture transportation.

Meetings and Conventions

The following list gives names of secretaries, dates of next or regular meetings and places of meetings:

ALLIED RAILWAY SUPPLY ASSOCIATION.—J. F. Gettrust, P. O. Box 5522, Chicago, Ill.

AMERICAN ASSOCIATION OF FREIGHT TRAFFIC OFFICERS.—W. R. Curtis, G. M. & O. R. R., 105 W. Adams St., Chicago, Ill.

AMERICAN ASSOCIATION OF GENERAL BAGGAGE AGENTS.—E. P. Soebbing, 1431 Railway Exchange Bldg., St. Louis, Mo. Annual meeting, October 6-8, 1942, Omaha, Neb.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—B. D. Branch, C. R. R. of N. J., 143 Liberty St., New York, N. Y.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—F. O. Whiteman, Room 332, Dearborn Station, Chicago, Ill.

AMERICAN ASSOCIATION OF RAILWAY ADVERTISING AGENTS.—E. A. Abbott, Poole Bros., Inc., 85 W. Harrison St., Chicago, Ill.

AMERICAN ASSOCIATION OF SUPERINTENDENTS OF DINING CARS.—F. R. Borger, C. I. & L. Ry., 836 S. Federal St., Chicago, Ill.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—A. G. Shaver, 310 S. Michigan Ave., Chicago, Ill. Annual meeting, October 13-15, 1942, Hotel Stevens, Chicago, Ill.

AMERICAN RAILWAY CAR INSTITUTE.—W. C. Tabbert, 19 Rector St., New York.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—H. C. Millman, Ind., Agent, Pennsylvania R. R., Union Station, Chicago, Ill.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in cooperation with the Association of American Railroads, Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago, Ill. Annual meeting, March 16-18, 1943, Palmer House, Chicago, Ill.

AMERICAN RAILWAY MAGAZINE EDITORS' ASSOCIATION.—R. R. Horner (Second Vice-Pres.), Norfolk & Western Magazine, Roanoke, Va.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—J. H. Huntt, Tower Bldg., Washington, D. C.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—C. E. Davies, 29 W. 39th St., New York, N. Y. Fall meeting, October 12-14, 1942, Sagamore Hotel, Rochester, N. Y. Annual meeting, November 30-December 4, 1942, Hotel Astor, New York, N. Y.

Railroad Division.—E. L. Woodward, *Railway Mechanical Engineer*, 105 West Adams St., Chicago, Ill.

AMERICAN TRANSIT ASSOCIATION.—Guy C. Hecker, 292 Madison Ave., New York, N. Y.

AMERICAN WOOD PRESERVERS' ASSOCIATION.—H. L. Dawson, 1427 Eye St. N. W., Washington, D. C. Annual meeting, April 27-29, 1943, Netherland-Plaza Hotel, Cincinnati, O.

ASSOCIATION OF AMERICAN RAILROADS.—H. J. Forster, Transportation Building, Washington, D. C.

Operations and Maintenance Department.—Charles H. Buford, Vice-President, Transportation Bldg., Washington, D. C.

Operating-Transportation Division.—L. R. Knott, 59 E. Van Buren St., Chicago, Ill.

Operating Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.

Transportation Section.—L. R. Knott, 59 E. Van Buren St., Chicago, Ill.

Fire Protection and Insurance Section.—W. F. Steffens, New York Central, Room 3317, 230 Park Avenue, New York, N. Y.

Freight Station Section.—L. R. Knott, 59 E. Van Buren St., Chicago, Ill.

Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.

Protective Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.

Safety Section.—J. C. Caviston, 30 Vesey St., New York, N. Y.

Telegraph and Telephone Section.—W. A. Fairbanks, 30 Vesey St., New York, N. Y.

Engineering Division.—W. S. Lacher, 59 E. Van Buren St., Chicago, Ill. Annual meeting, March 16-18, 1943, Palmer House, Chicago, Ill.

Construction and Maintenance Section.—W. S. Lacher, 59 E. Van Buren St., Chicago, Ill. Annual meeting, March 16-18, 1943, Palmer House, Chicago, Ill.

Electrical Section.—W. S. Lacher, 59 E. Van Buren St., Chicago, Ill.

Signal Section.—R. H. C. Balliet, 30 Vesey St., New York, N. Y. Annual meeting, October 13-14, 1942, Hotel Stevens, Chicago, Ill.

Mechanical Division.—Arthur C. Browning, 59 E. Van Buren St., Chicago, Ill.

Electrical Section.—J. A. Andreucetti, 59 E. Van Buren St., Chicago, Ill.

Purchases and Stores Division.—W. J. Farrell (Executive Vice-Chairman), Transportation Building, Washington, D. C.

Freight Claim Division.—Lewis Pilcher, 59 E. Van Buren St., Chicago, Ill.

Motor Transport Division.—George M. Campbell, Transportation Bldg., Washington, D. C.

Car-Service Division.—E. W. Coughlin, Transportation Building, Washington, D. C.

Finance, Accounting, Taxation and Valuation Department.—E. H. Bunnell, Vice-President, Transportation Building, Washington, D. C.

Accounting Division.—E. R. Ford, Transportation Building, Washington, D. C.

Treasury Division.—E. R. Ford, Transportation Building, Washington, D. C.

Traffic Department.—A. F. Cleveland, Vice-President, Transportation Building, Washington, D. C.

ASSOCIATION OF RAILWAY CLAIM AGENTS.—F. L. Johnson, Claim Agent, Alton R. R., 340 W. Harrison St., Chicago, Ill.

BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—P. R. Austin, Johns-Manville Sales Corp., Merchandise Mart, Chicago, Ill. Exhibit in conjunction with convention of the American Railway Bridge & Building Association, October 13-15, 1942, Hotel Stevens, Chicago, Ill.

CANADIAN RAILWAY CLUB.—C. R. Crook, 4415 Marcil Ave., N. D. G., Montreal, Que. Reg-

* * *

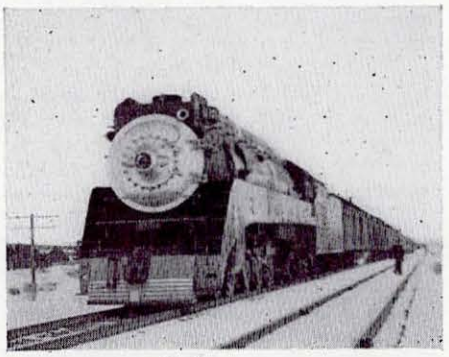


Photo by Hugh F. O'Neil

S. P. "Challenger" Westbound at Moor, Nev.

ular meetings, second Monday of each month except June, July and August, Windsor Hotel, Montreal, Que.

CAR DEPARTMENT ASSOCIATION OF ST. LOUIS, MO.—J. J. Sheehan, 1101 Missouri Pacific Bldg., St. Louis, Mo. Regular meetings, third Tuesday of each month, except June, July and August, Hotel De Soto, St. Louis, Mo.

CAR DEPARTMENT OFFICERS' ASSOCIATION.—Frank Kartheiser, Chief Clerk, Mechanical Dept., C. B. & Q., Chicago, Ill.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—G. K. Oliver, 8238 S. Campbell Ave., Chicago, Ill. Regular meetings, second Monday of each month, except June, July and August, La Salle Hotel, Chicago, Ill.

CENTRAL RAILWAY CLUB OF BUFFALO.—Mrs. M. D. Reed, 1840-42 Hotel Statler, McKinley Square, Buffalo, N. Y. Regular meetings, second Thursday of each month, except June, July and August, Hotel Statler, Buffalo, N. Y.

EASTERN ASSOCIATION OF CAR SERVICE OFFICERS.—J. T. Bougher, 424 W. 33rd St., (11th floor), New York, N. Y.

EASTERN CAR FOREMAN'S ASSOCIATION.—W. P. Dizard, 30 Church St., New York, N. Y. Regular meetings, second Friday of January, March, April, May, October and November, 29 W. 39th St., New York, N. Y.

LOCOMOTIVE MAINTENANCE OFFICERS' ASSOCIATION.—C. M. Lipscomb, 1721 Parker Street, No. Little Rock, Ark.

MASTER BOILER MAKERS' ASSOCIATION.—A. F. Stiglmeier, 29 Parkwood St., Albany, N. Y.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—Ben Smart, 7413 New Post Office Bldg., Washington, D. C. Annual meeting, November, 1942, Dallas, Tex.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—C. H. White, Room 1826, 208 S. La Salle St., Chicago, Ill.

NEW ENGLAND RAILROAD CLUB.—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meetings, second Tuesday of each month, except June, July, August and September, Hotel Touraine, Boston, Mass.

NEW YORK RAILROAD CLUB.—D. W. Pye, 30 Church St., New York, N. Y. Regular meetings, third Thursday of each month, except June, July, August, September, and December, 29 W. 39th St., New York, N. Y.

PACIFIC RAILWAY CLUB.—William S. Wollner, P. O. Box A, Sausalito, Cal. Regular meetings, second Thursday of each alternate month, at Palace Hotel, San Francisco, Cal., and Hotel Hayward, Los Angeles, Cal.

RAILWAY BUSINESS ASSOCIATION.—P. H. Middleton, First National Bank Bldg., Chicago, Ill.

RAILWAY CLUB OF PITTSBURGH.—J. D. Conway, 1647 Oliver Bldg., Pittsburgh, Pa. Regular meetings, fourth Thursday of each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.

RAILWAY ELECTRIC SUPPLY MANUFACTURERS' ASSOCIATION.—J. McC. Price, Allen-Bradley Company, 624 W. Adams St., Chicago, Ill.

RAILWAY FUEL AND TRAVELING ENGINEERS' ASSOCIATION.—T. Duff Smith, Room 811, Utilities Bldg., 327 S. La Salle St., Chicago, Ill.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—J. D. Conway, 1647 Oliver Bldg., Pittsburgh, Pa.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York, N. Y. Meets with Telegraph and Telephone Section of A. A. R.

RAILWAY TIE ASSOCIATION.—Roy M. Edmonds, 903 Syndicate Trust Bldg., St. Louis, Mo.

ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.—A. G. Shaver, 310 S. Michigan Ave., Chicago, Ill. Annual meeting, September 15-17, 1942, Hotel Stevens, Chicago, Ill.

SIGNAL APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York, N. Y. Meets with A. A. R. Signal Section.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, 4 Hunter St., S. E., Atlanta, Ga. Regular meetings, third Thursday in January, March, May, July, September and November, Ansley Hotel, Atlanta, Ga.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—D. W. Brantley, C. of Ga. Ry., Savannah, Ga.

TORONTO RAILWAY CLUB.—D. M. George, P. O. Box 8, Terminal "A," Toronto, Ont. Regular meetings, fourth Monday of each month, except June, July and August, Royal York Hotel, Toronto, Ont.

TRACK SUPPLY ASSOCIATION.—Lewis Thomas, O. and C. Company, 59 E. Van Buren St., Chicago, Ill. Exhibit in conjunction with Roadmasters' and Maintenance of Way Association Convention, September 14-17, 1942, Hotel Stevens, Chicago, Ill.

UNITED ASSOCIATIONS OF RAILROAD VETERANS.—Roy E. Collins, 12 Hatfield Place, Port Richmond, Staten Island, N. Y. Annual meeting, October 10-11, 1942, Baltimore, Md.

WESTERN RAILWAY CLUB.—E. E. Thulin (Executive Secretary) Room 822, 310 S. Michigan Ave., Chicago, Ill. Regular meetings, third Monday of each month, except January, June, July, August and September, Hotel Sherman, Chicago, Ill.

Equipment and Supplies

Baldwin's Orders Rose in May

The dollar value of orders taken in May by the Baldwin Locomotive Works and wholly owned subsidiaries was $11,285,003, as compared with $6,366,706 for May, 1941. The month's bookings brought the total for the five months of 1942 to $232,937,387, as compared with $36,875,997 for the same period of 1941. Sales billed by the Baldwin Locomotive Works and wholly owned subsidiaries in May aggregated $13,576,676, including billings of cost under cost-plus-a-fixed fee contracts, as compared with $3,766,468 in May, 1941. Sales billed for the five months of 1942 were $59,637,056, as compared with $15,006,114 for the same period of 1941. On May 31, 1942, unfilled orders of the Baldwin Locomotive Works and wholly owned subsidiaries amounted to $334,650,730, as compared with $161,942,347 on January 1, 1942, and with $131,910,721 on May 31, 1941.

LOCOMOTIVES

THE CENTRAL OF GEORGIA has placed an order for one Diesel-electric switching locomotive of 1,000 hp. with the Electro-Motive Corporation.

THE DENVER & RIO GRANDE WESTERN is obtaining six 44-ton Diesel-electric freight and yard type locomotives for operation at various points on the system from the General Electric Company.

FREIGHT CARS

THE UTAH COPPER COMPANY is reported to be in the market for 100 ore cars of 100 tons' capacity.

THE NATIONAL TUBE COMPANY is reported to be in the market for 30 hopper cars of 70 tons' capacity.

SIGNALING

THE UNION PACIFIC will install a centralized traffic control system on 175 miles of single track between Las Vegas, Nev., and Daggett, Cal., and orders have been placed with the Union Switch & Signal Co. for the materials required. Power-operated switches will be equipped with Style M-22-B low voltage d-c. switch and lock movements, with signals of the H-2 searchlight type, all controlled from a single C.T.C. machine located at Las Vegas, and equipped with an automatic train-graph to register the "OS" points throughout the territory. Electric switch locks are being provided for all hand-operated switches in C.T.C. territory. The signaling throughout the entire mileage will be controlled and indicated over one pair of wires; while communication facilities will also be maintained over the same pair of wires. The entire territory will be divided into approximately three equal sections, with two of these sections controlled and indicated by Union coded carrier control which will be transmitted over the same pair of line wires that transmit the d-c. code control and indication in the first section adjacent to the control machine. All insrument houses will be factory wired, with the field construction by the signal department's forces of the railroad.

Supply Trade

The Jones & Laughlin Steel Corporation, Pittsburgh, Pa., increased its annual steel ingot producing capacity approximately one million tons July 1 when it took over the **Otis Steel Company,** Cleveland, Ohio, in a 39 million dollar transaction. The sale was ratified by Otis shareholders on April 24th in line with a contract between the companies entered into in February. An operating, marketing and distributing center at Cleveland was listed among other advantages Jones & Laughlin gained by the transaction. **E. J. Kulas,** former president of Otis, becomes a director of Jones & Laughlin and vice-chairman of its executive committee.

Allan Wallace, director of traffic of **Johns-Manville,** New York, retired on June 30. He entered railway service with the Grand Trunk at Grand Rapids, Mich., and later was appointed assistant to the general manager of Reading Dispatch at Buffalo, N. Y. Still later he was appointed general traffic manager of the Philip Carey Company, Cincinnati, Ohio, with headquarters at Chicago and in 1914 entered the employ of Johns-Manville as general traffic manager. He was promoted to director of traffic in December, 1937.

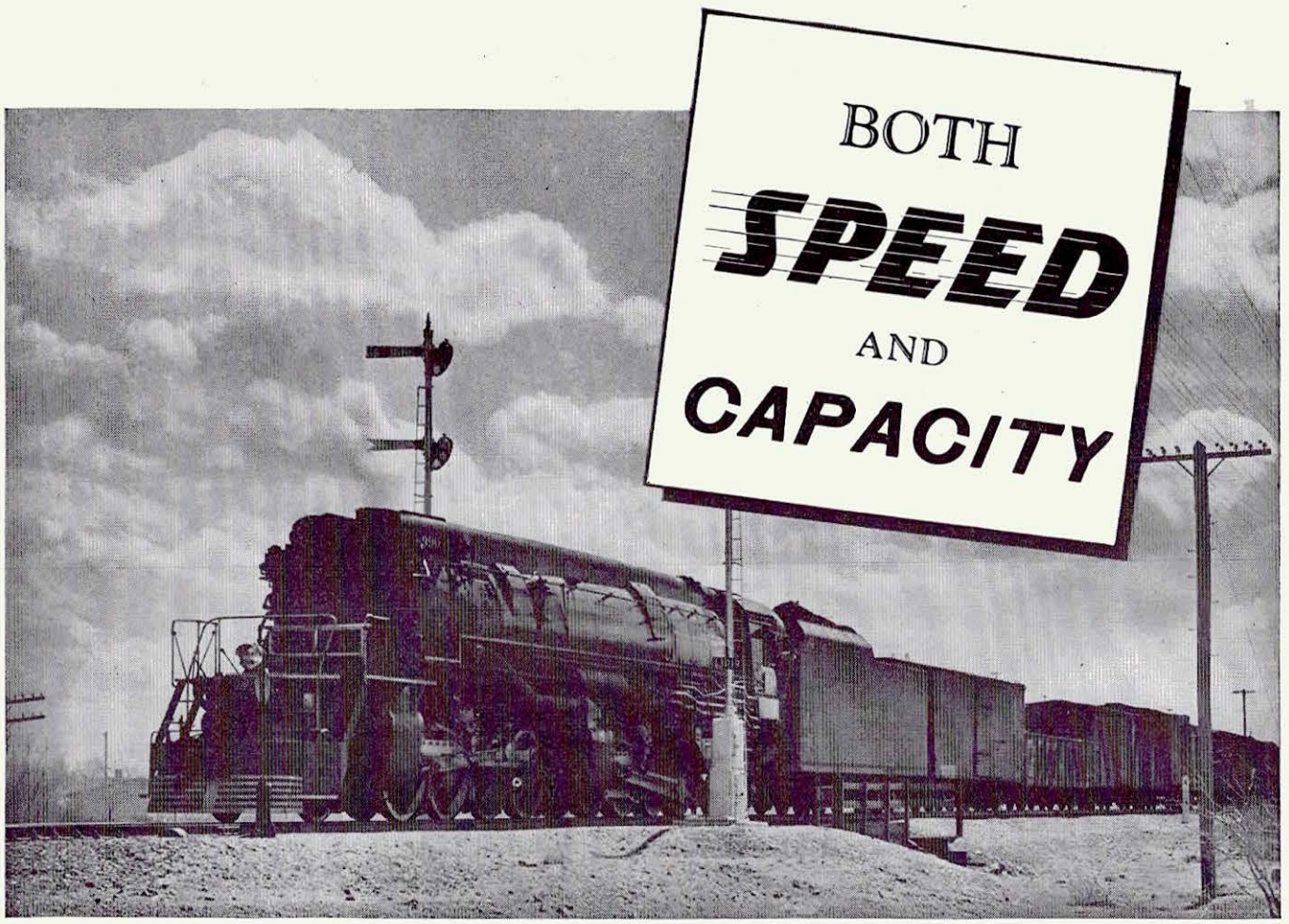
Victor W. Ellet, president of the **Hunt-Spiller Manufacturing Corporation,** Boston, Mass., has also been made vice-chairman of the board of directors. Mr. Ellet began his career as a machinist apprentice with the Atchison, Topeka & Santa Fe at Madison, Iowa, in 1897. From

Victor W. Ellet

1901 to 1903 he served as a machinist with the St. Louis, Iron Mountain and Southern (now the Missouri Pacific), the Fort Worth & Denver City and the Choctaw, Oklahoma & Gulf (now the Chicago, Rock Island & Pacific). In 1903-04 he was a machinist for the Santa Fe; 1904-05, an

News Department continued on next left-hand page

The Steam Locomotive Provides . . .



For heavy freight service, the steam locomotive provides any desired speed, without sacrificing the characteristics of capacity, economy, flexibility or safety of operation.

LIMA LOCOMOTIVE WORKS INCORPORATED LOCOMOTIVE WORKS, INCORPORATED, LIMA, OHIO

expert tool maker at the United States Government's Rock Island arsenal; 1905-06, a mechanical official for the Missouri Pacific; and 1906-11, a mechanical official for the Rock Island. He joined the Hunt-Spiller Manufacturing Corporation as a mechanical representative in 1911 and was appointed sales manager of that company in 1925, vice-president in 1928 and president and general manager in 1936.

William L. Macatee has been appointed traffic manager of the **Texas Company,** with headquarters at New York, to succeed **Charles Ervin,** who has retired on account of illness.

OBITUARY

William J. Peters, who retired as treasurer of the Pullman-Standard Car Manufacturing Company on April 30, 1940, died in Chicago on June 29.

John W. Braffett, retired general manager of sales of the Oliver Iron & Steel Corporation, Pittsburgh, Penna., died in Detroit, Mich., after more than a year's retirement because of poor health.

Philip D. Block, chairman of the executive committee of the Inland Steel Company, Chicago, died in the Presbyterian hospital in that city on June 30. Mr. Block, the last surviving founder of the Inland Steel Company, played an important part, along with his father, Joseph Block, and the late George H. Jones, in the organization of the company in 1893.

Philip Block was born at Cincinnati, Ohio, on February 16, 1871, and, after graduating from high school in 1888, joined the Block-Pollak Iron Company, Cincinnati, Ohio, and Chicago, of which his father was senior partner. In 1893, he became one of

Philip D. Block

the founders of Inland, which was organized on October 3 and incorporated on October 30, and was elected a director and its treasurer. Eight years later he was elected first vice-president and on July 29, 1919, was elected the fifth president of the company. He held this position until April 30, 1941, when he became chairman of the executive committee.

Financial

Railroad Securities Eligible for N. Y. Banks Up 2.4 Billion

The list of securities considered legally eligible by the New York State Banking department for investment by savings banks includes this year railroad securities amounting to $2,457,564,705 which were not included in 1941. As in recent years, the rail issues appear upon the list under two classifications. Some of the issues are considered to be eligible under subdivision 7 of Section 235 of the law which prescribes that in order that railroad bonds may be eligible for purchase by savings banks, the issuing road must have earned fixed charges one and one-half times in five of the last six fiscal years and in the last fiscal year, and, in addition, must have paid dividends equal to one-fourth the amount of fixed charges. Pursuant to these requirements, $218,000,000 of Louisville & Nashville bonds are now considered as eligible investments under subdivision 7. In addition, $50,650,000 of equipment trust certificates issued by several roads have similarly qualified. The Louisville & Nashville securities were previously eligible investments under subdivision 7-a, the so-called moratorium amendment originally passed by the legislature in 1931 but modified in some measure in 1938, 1939 and 1940.

An additional $2,406,914,705 in rail securities are now considered eligible investments according to the banking department's interpretation of subdivision 7-a which provides, in effect, that the issuing road must have earned fixed charges at least one and one-half times in 1941 and at least once in four of the preceding five years. Included with the securities now qualifying under this provision of law are New York Central obligations having a par value of $831,000,000; Southern Pacific $424,000,000; Southern Railway $227,000,000; Chicago, Burlington & Quincy $223,000,000. Bangor & Aroostook $17,029,000; Illinois Central $200,000,000; and Atlantic Coast Line $108,000,000.

Removals of railroad obligations from the list consist of obligations which have been called or which have matured, totaling $64,700,000.

BALTIMORE & OHIO.—*Abandonment by the Valley.*—The Valley has asked the Interstate Commerce Commission for authority to abandon and remove that part of its line extending from Staunton, Va., to a connection with the Chesapeake & Ohio at Lexington, 35.4 miles. At the same time the Baltimore & Ohio seeks authority to abandon operation over the Valley's line and over the line of the C. & O. from valuation station 3175 plus 25.5 to East Lexington, Va., 1.5 miles.

CHICAGO & EASTERN ILLINOIS.—*Abandonment.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to abandon a branch line extending from Momence, Ill., to State Line Junction, 10.9 miles. The certificate will be issued with the express condition that the branch, or any portion thereof, will be sold at a price not less than its fair net salvage value to any responsible person, firm or corporation offering, within 30 days, to purchase it for continued operation.

CHICAGO & NORTH WESTERN.—*Equipment Collateral Substitution.*—Trustee has petitioned the Federal district court at Chicago for authority to invest a $5,000,000 equipment trust fund in United States government bonds. Details of the equipment collateral substitution were published in the *Railway Age* of June 27.

CHICAGO & NORTH WESTERN.—*Equipment Trust Certificates.*—This company has asked the Interstate Commerce Commission to approve a plan whereby the trustee of a recent equipment trust will invest some $3,750,000 of the proceeds of the trust dated March 5, 1942, in government bonds until such time as the equipment called for in the trust is available. The company also seeks authority to substitute gondola, hopper, flat or box cars for equipment specifically called for in the equipment trust. The commission was informed that 75 per cent of the holders of the certificates have agreed to the change in the trust.

CUYAHOGA VALLEY. — *Control.* — The Jones & Laughlin Steel Corporation has been authorized by Division 4 of the Interstate Commerce Commission to acquire control of this company through ownership of its stock. The Cuyahoga Valley is owned by the Otis Steel Company which is being taken over by Jones & Laughlin.

EAST BROAD TOP RAILROAD & COAL COMPANY.—*Deficit Status.*—Division 4 of the Interstate Commerce Commission has found that this company did not sustain a decrease in its net railway operating income while under private operation in the federal control period and is not entitled to the benefits of section 204 of the Transportation Act of 1920, as amended January 7, 1941. As a result of this finding, the claim has been dismissed.

ERIE.—*Abandonment.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to abandon its ferry between Jersey City, N. J., and West Twenty-third St., New York City, two miles.

LAONA & NORTHERN.—*Abandonment.*—This company has asked the Interstate Commerce Commission for authority to abandon its Silver Lake branch extending from a connection with the main line one mile west of Snyders, Wis., to the end of the line, 8.9 miles.

ILLINOIS CENTRAL.—*Abandonment by the Yazoo & Mississippi Valley.*—The Yazoo & Mississippi Valley has asked the Interstate Commerce Commission for authority to abandon a line extending from Silver City, Miss., to the end of the line at Holly Bluff, 24.7 miles.

Abandonment.—This company has asked the Interstate Commerce Commission for authority to abandon a line extending from Potomac, Ill., to the end of the line at Hedrick, Ind., 16.3 miles.

Abandonment by the Dubuque & Sioux City.—The Dubuque & Sioux City and the

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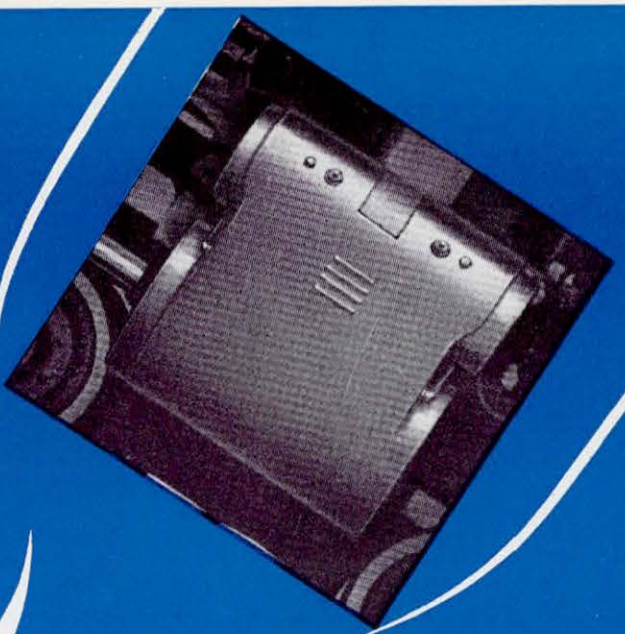

HERE'S THE BOTTLENECK

..in train load-speed capacity

THE FRANKLIN SYSTEM OF Steam Distribution

Steam handling methods, not boiler capacity have limited the load-speed capacity of the locomotive.

This has been proved repeatedly in road service and on the test plant by the Franklin System of Steam Distribution.

The Franklin System of Steam Distribution improves steam distribution and achieves a 33⅓% increase in train load-speed capacity by:

Separation of valve events, so that admission, cut-off, release and compression are independently and positively controlled.

Larger inlet and exhaust passages and improved steam flow.

Reduced cylinder clearance volume.

Increased mechanical efficiency, obtained by reduced weight of moving masses, reduced friction and elimination of carbonization.

FRANKLIN RAILWAY SUPPLY COMPANY, INC. NEW YORK CHICAGO

In Canada: FRANKLIN RAILWAY SUPPLY COMPANY, LIMITED, MONTREAL

Illinois Central, respectively, have asked the Interstate Commerce Commission for authority to abandon a line and the operation thereof extending from Stacyville Junction, Iowa, to the end of the line at Stacyville, 7.9 miles.

LOUISIANA & ARKANSAS.—*Securities.*—Acting on this company's request, Division 4 of the Interstate Commerce Commission has dismissed its application of February 2, 1937, in Finance Docket No. 11530, seeking authority to issue 29,724 shares of its four per cent preferred stock of a par value of $1,486,200, and $5,944,800 of its first mortgage bonds, series B, in connection with a proposal to acquire the properties of the Rock Island, Arkansas & Louisiana.

MOUNT HOPE MINERAL.—*Deficit Status.*—Division 4 of the Interstate Commerce Commission has found that this company was not engaged in general transportation within the meaning of that phrase as used in section 204 of the Transportation Act of 1920, as amended January 7, 1941, and is not entitled to any payment for any losses incurred during the period of private operation in the federal control period. As a result of this finding, the company's claim has been dismissed.

NEVADA COPPER BELT.—*Abandonment.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to abandon the following lines:

1. From Hudson, Nev., northwesterly to the end of the line at Ludwig, nine miles, and
2. From Wabuska, Nev., to Thompson, 2.5 miles.

NEW YORK, SUSQUEHANNA & WESTERN.—*Interest Payment.*—Trustee announced July 1 that interest would be paid upon two additiohal coupons of the New York, Susquehanna & Western Terminal first mortgage bonds which coupons matured respectively on November 1, 1939, and May 1, 1940.

PERE MARQUETTE.—*Equipment Trust Certificates.*—This company has been authorized by Division 4 of the Interstate Commerce Commission to assume liability for $680,000 of two per cent serial equipment trust certificates, maturing in 10 equal annual installments of $68,000 on June 15 in each of the years from 1943 to 1952, inclusive. The issue has been sold at 99.625 to Halsey, Stuart & Co., Inc., making the average annual cost to the company approximately 2.1 per cent.

PORTLAND (ME.) TERMINAL.—*Abandonment.*—This company has asked the Interstate Commerce Commission for authority to abandon 2.085 ft. of track in the city of Portland, Me.

RIO GRANDE & EAGLE PASS.—*Deficit Status.*—Division 4 of the Interstate Commerce Commission has found that this company did not sustain a deficit during the period of private operation in the federal control period and is not entitled to benefit under section 204 of the Transportation Act of 1920, as amended January 7, 1941. As a result of this finding the company's claim has been dismissed.

SOUTHERN PACIFIC.—*Equipment Trust Certificates.*—This company has asked the Interstate Commerce Commission to approve a plan whereby the trustee of a recent equipment trust would be permitted to substitute 12 4-8-8-4 oil-burning locomotives for 856 steel-sheathed, wood-lined box cars, the construction of which has been delayed by the War Production Board. The company told the commission that it is believed that delivery can be obtained on the locomotives and that 90 per cent of the holders of the trust have agreed to the substitution.

SOUTHERN PACIFIC.—*Completes Repayment of Bank Loans.*—The Southern Pacific on June 29 wiped out all bank indebtedness by pre-paying $3,750,000 of notes which would have matured April 1-October 1, 1943. On October 1, 1941, the railroad issued $20,000,000 of serial notes evidencing new bank loans, maturing over a period of four years in equal quarterly installments of $1,250,000 beginning January 1, 1942. The proceeds of the new loans were used to repay the balance of a $7,000,000 Reconstruction Finance Corporation loan due May 1, 1945, and to repay the balance of $13,000,000 of short term bank loans due November 1, 1941. On October 31, 1941, a payment of $5,000,000 was made on the new serial bank loans and subsequently $2,500,000 each on March 5 and 25, and April 15, 1942; and $3,750,000 on May 25, 1942.

TAMPA NORTHERN. — *Compensation of Trustee and Counsel to Trustee.*—Division 4 of the Interstate Commerce Commission has ordered that a maximum compensation at the rate of $4,000 a year be paid to George G. Thomas as trustee of this company during reorganization proceedings under section 77 of the Bankruptcy Act. At the same time Division 4 fixed the maximum salary of Dozier A. DeVane as counsel to the trustee at $5,000 a year.

UNION PACIFIC.—*Abandonment.*—This company has asked the Interstate Commerce Commission for authority to abandon its Greeley branch extending from Greeley Junction, Colo., to Briggsdale, 26.2 miles; and its Pleasant Valley branch extending from Cloverly, Colo., to Purcell, 14.2 miles.

Average Prices of Stocks and Bonds

	June 30	Last week	Last year
Average price of 20 representative railway stocks..	24.97	24.39	28.85
Average price of 20 representative railway bonds..	63.72	63.18	64.19

Dividends Declared

Norfolk & Western.—Common, $2.50, quarterly, payable September 19 to holders of record August 31; Adjustment preferred, $1.00, quarterly, payable August 19 to holders of record July 31.

Philadelphia & Trenton.—$2.50, quarterly, payable July 10 to holders of record July 1.

Pittsburgh, Cincinnati, Chicago & St. Louis.—$2.50, semi-annually, payable July 20 to holders of record July 10.

Reading Company.—25¢, quarterly, payable August 13 to holders of record July 16; 4 Per Cent Non-Cumulative First Preferred, 50¢ quarterly, payable September 10 to holders of record August 20; 2nd Preferred, 50¢, quarterly, payable October 8 to holders of record September 17.

Richmond, Fredericksburg & Potomac.—Common voting shares, $3.00, semi-annually; Common Non-voting shares, $3.00, semi-annually; Dividend Obligations, $3.00, semi-annually, all payable June 30 to holders of record June 22.

Texas & Pacific.—5 Per Cent Non-Cumulative Preferred, $2.50, payable June 30 to holders of record June 18.

Railway Officers

EXECUTIVES

Col. Carl R. Gray, Jr., has been promoted to Brigadier-General continuing in charge of the Military Railway Service, with headquarters as before at Ft. Snelling, Minn.

Eugene S. Williams, vice-president and general counsel of the Western Maryland, with headquarters at Baltimore, Md., has been granted a leave of absence to enter United States military service. **Walter C. Capper,** counsel at Cumberland, Md., has been appointed acting general counsel, in charge of the law department, in Mr. Williams' absence.

Edward P. Flintoft, general counsel for the Canadian Pacific, with headquarters at Montreal, Que., has been appointed also vice-president, filling the vacancy caused by the death of **W. N. Tilley,** who was consulting counsel for the company at Toronto, Ont. Mr. Flintoft was born at Sarnia, Ont., on October 17, 1879, and was graduated from the University of Toronto in 1900, studying law at Osgoode Hall, Toronto. He entered the service of the Canadian Pacific in November, 1908, as assistant to the solicitor at Montreal, where he has been stationed throughout his career. Four years later he was promoted to assistant solicitor and in August, 1914, he was promoted to solicitor. In 1917 he was appointed assistant general solicitor, and in 1929 he was promoted to general solicitor. On May 1, 1936, Mr. Flintoft became general counsel.

Edward P. Flintoft

Harry C. Schmidt, whose appointment as assistant to vice-president in charge of traffic of the Delaware, Lackawanna & Western at New York was reported in the *Railway Age* of June 27, was born at Chicago. He entered railroad service with the Erie in September, 1922, as stenographer in the office of the freight traffic manager of the Western district and was promoted on May 1, 1923, to secretary to the general freight agent. He later became secretary

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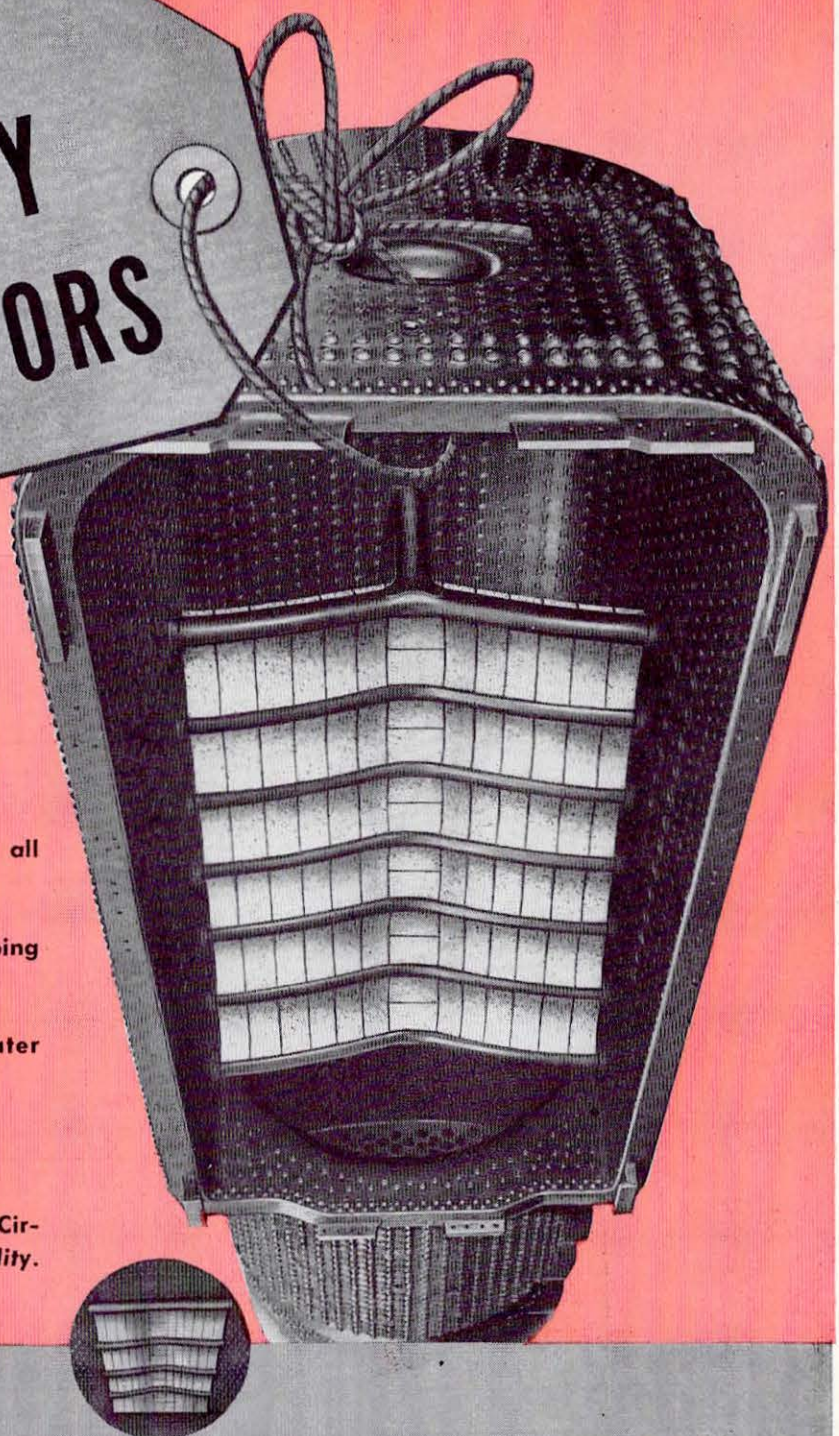
HIGHER LOCOMOTIVE AVAILABILITY

WITH SECURITY CIRCULATORS



BECAUSE

Security Circulators provide . . .

- ★ **Improved Arch Brick Support for all Locomotive Fireboxes**
- ★ **Reduced Flue Cleaning, Honeycombing and Cinder Cutting**
- ★ **Improved Circulation in Side Water Legs**
- ★ **Lower Boiler Maintenance**

. . . locomotives equipped with Security Circulators show greatly increased *availability*.

AMERICAN ARCH COMPANY, INC.

60 East 42nd Street, New York, N. Y.

SECURITY CIRCULATOR DIVISION

to the vice-president of the operating department at Chicago, being transferred to secretary to the vice-president of the traffic department at Chicago in February, 1927. Mr. Schmidt was promoted to chief clerk, traffic department, in November, 1931, and in August, 1938, he was appointed

Harry C. Schmidt

assistant general freight agent at Youngstown, Ohio. He was promoted to general eastern freight agent at New York on January 1, 1941, which position he held until July 1, when he left the Erie to become assistant to vice-president in charge of traffic of the Lackawanna.

Warren Robert Elsey, general superintendent of motive power of the Eastern region of the Pennsylvania, with headquarters at Philadelphia, Pa., has been appointed assistant to the vice-president in charge of real estate, purchases and insurance. Mr. Elsey was born on April 1, 1892, at Pittsburgh, Pa., and was graduated from Carnegie Institute of Technology in 1910. He entered railroad service on September 26, 1911, as draftsman on the Pennsylvania at Pittsburgh and served in this capacity until March 16, 1916, when he became piece work inspector at Shire Oaks, Pa. On July

Warren Robert Elsey

16, 1917, he was appointed shop inspector, with headquarters at South Pittsburgh, Pa., becoming assistant master mechanic at Canton, Ohio, on April 1, 1920, and motive power inspector of the Western Pennsylvania division on March 1, 1921. Mr. Elsey was appointed assistant master mechanic at Conemaugh, Pa., on February 1, 1923, which position he held until February 1, 1928, when he was promoted to master mechanic at Baltimore, Md. From January to December, 1929, he was acting superintendent of floating equipment at Jersey City, N. J., and on December 1, 1929, he became superintendent of floating equipment there. Mr. Elsey was appointed mechanical engineer at Philadelphia on October 1, 1936, which position he held until January, 1941, when he was appointed general superintendent of motive power of the Eastern region.

FINANCIAL, LEGAL AND ACCOUNTING

E. G. Adams, Jr., agent in the real estate department of the Pennsylvania, with headquarters at Philadelphia, Pa., has been promoted to assistant real estate agent, succeeding **H. L. Thomas, Jr.,** who has been granted leave of absence for military duty.

William T. Faricy, general solicitor of the Chicago & North Western and the Chicago, St. Paul, Minneapolis & Omaha, with headquarters at Chicago, has been pro-

William T. Faricy

moted to general counsel of the North Western and elected a director and vice-president and general counsel of the Omaha, succeeding **Samuel H. Cady,** who has resigned because of ill health.

Nelson J. Wilcox, assistant general solicitor of the North Western at Chicago has been promoted to general solicitor; **Nye F. Morehouse,** assistant general solicitor at Chicago and **Lowell Hastings,** general attorney at Chicago, have been promoted to assistant general counsels; **P. F. Gault,** commerce attorney at Chicago, has been promoted commerce counsel; **Nelson Trottman,** general attorney at Chicago, and **Warren Newcome,** general attorney of the Omaha and assistant attorney for the C. & N. W. at St. Paul, Minn., have been promoted to assistant general solicitors, and **F. O. Steadry** of the claim department of the C. & N. W. at Chicago has been promoted to attorney.

Mr. Faricy was born at St. Paul, Minn., on March 7, 1893, attended the College of St. Thomas and was graduated from the St. Paul College of Law. He entered railway service in 1914 as attorney for the Omaha. From 1916 to 1917 he was engaged in general practice, giving up his work in the latter year to serve as a captain of infantry with a combat division in France. Following the war he returned to general practice. He returned to railway service in 1920 as general attorney for

Samuel H. Cady

the Omaha at St. Paul and in 1924 he was appointed commerce attorney for the North Western. From 1925 to 1927 he was vice-president of the Hauser Securities Company at Portland, Ore., and later at Long Beach, Cal. He returned to railroading as Minnesota attorney for the North Western in 1927, and from 1929 to 1933 he served as general solicitor of the Omaha at St. Paul, as well as attorney for the North Western. In 1933 he was advanced to general solicitor of the North Western and the Omaha, with headquarters at Chicago, which position he held until his recent promotion. Mr. Faricy was associate counsel for the American railroads in the 1938 railway wage case and acted in a similar capacity for the Western railroads in the 1941 wage case.

Mr. Cady was born at Excelsior, Wis., on February 4, 1870, and graduated from the University of Wisconsin in 1897. From that year until 1921, Mr. Cady engaged in the practice of law as a member of the firm of Cady, Strehlow & Kaftan at Green Bay, Wis. In the latter year he was appointed Wisconsin attorney for the North Western, with headquarters at Milwaukee, Wis., and in 1924 he became assistant general solicitor, with headquarters at Chicago. In June, 1925, Mr. Cady was promoted to general solicitor, and in February, 1933, he was elected vice-president and general counsel of the North Western and the Omaha, with headquarters at Chicago.

OPERATING

W. W. Morrison, chief engineer of the Pittsburg & Shawmut, with headquarters at Kittanning, Pa., has also been elected general superintendent of the company.

F. E. Tibbetts, assistant superintendent of the Canadian National, with headquarters at New Glasgow, N. S., has been appointed superintendent of terminals of the Sydney subdivision, with headquarters at Sydney, N. S. **G. O. Baker,** trainmaster at Bridgewater, N. S., has been appointed

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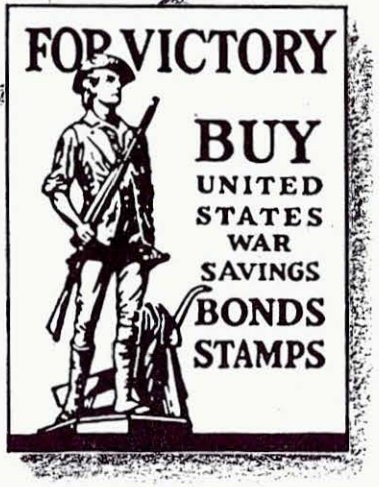
Our INDEPENDENCE, NATIONAL AFFAIRS, ARMY, NAVY and MARINES depend largely upon our main transportation system—THE RAILROADS

To Keep 'em Rolling

—Keep 'em Fit



A-1510

ELESCO

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AMERICAN THROTTLES • STEAM DRYERS
EXHAUST STEAM INJECTORS • PYROMETERS

THE SUPERHEATER COMPANY

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assistant superintendent at New Glasgow, succeeding Mr. Tibbetts. **W. A. Bell,** general yardmaster at Halifax, N. S., has been appointed trainmaster at Bridgewater, succeeding Mr. Baker.

Dane R. Waite, whose promotion to superintendent of the Spokane International, with headquarters at Spokane, Wash., was

Dane R. Waite

reported in the *Railway Age* of June 20, was born at Menomonie, Wis., on January 7, 1880, and served in the Spanish-American War. He entered railway service in 1906 in the engineering department of the Great Northern at Seattle, Wash., and in 1912 went with the Northern Pacific in the engineering department at Tacoma, Wash. From 1914 to 1917, Mr. Waite worked for Porter Brothers, railroad contractors, in Washington and Oregon and on January 1, 1918, he went with the Spokane International as general bridge and building foreman, which position he held until his recent promotion.

James C. Wroton, whose promotion to general manager of the Seaboard Air Line at Norfolk, Va., was reported in the *Railway Age* of June 20, was born at Denmark,

James C. Wroton

S. C., on December 25, 1884. He entered railroad service in November, 1902, as telegraph operator with the Seaboard Air Line. From 1904 to 1906 he was train dispatcher and agent for the Atlantic & Birmingham (now Atlanta, Birmingham & Coast), then serving as operator and train dispatcher for the Atlantic Coast Line at Waycross, Ga. From 1907 to 1911 Mr. Wroton served as train dispatcher successively with the Southern at Knoxville, Tenn., the Seaboard Air Line at Hamlet, N. C., the Missouri Pacific at Poplar Bluff, Mo., and the Southern Pacific at Tucson, Ariz. In 1911 Mr. Wroton went with the Seaboard Air Line as chief dispatcher at Hamlet and in 1915 he became assistant to superintendent transportation at Norfolk, Va. He was appointed superintendent transportation in 1918 and from 1922 to 1928 he was transportation assistant on the staff of the operating vice-president at Norfolk and Savannah, Ga. Mr. Wroton became general superintendent transportation in 1928, serving successively at Savannah and Norfolk.

Carl H. Burgess, whose promotion to superintendent on the Northern Pacific, with headquarters at Tacoma, Wash., was reported in the *Railway Age* of June 20, was born at Worcester, Mass., on February 17, 1894, and studied civil engineering at Worcester Polytechnic Institute from 1912 to 1916. He entered railway service on June 19, 1916, as a clerk in the track de-

Carl H. Burgess

partment of the Northern Pacific at Billings, Mont., and on January 19, 1917, he was transferred to the engineering department as a rodman at Livingston, Mont., later serving as a draftsman and assistant engineer at that point. On April 23, 1923, Mr. Burgess was appointed assistant roadmaster at Livingston and in January, 1925, he was advanced to roadmaster at Fargo, N. D., later being transferred to Glendive, Mont. In April, 1929, he was promoted to division roadmaster at Jamestown, N. D., and in January, 1932, he was transferred to Missoula, Mont. Mr. Burgess was appointed trainmaster-roadmaster at Missoula in February, 1936, and five months later, he was appointed trainmaster at Pasco, Wash., later being transferred successively to Auburn, Wash., and Tacoma. In November, 1939, he was promoted to assistant superintendent at Tacoma, which position he held until his recent promotion, effective June 1.

W. G. Dorsey, special assistant to the chairman of the Car Service division of the Association of American Railroads, with headquarters at Washington, D. C., has been appointed transportation assistant of the Delaware, Lackawanna & Western, with headquarters at New York. Mr. Dorsey was born at Buffalo, N. Y., and entered railroad service with the Erie in November, 1917, as a messenger at Buffalo. He became a yard clerk at East Buffalo in 1918, later becoming assistant chief yard clerk. He was promoted, in 1926, to assistant division car distributor, and three years later he became car distributor of the Buffalo division. In August, 1931, Mr. Dorsey was appointed system assistant chief car distributor and in 1933 he became system chief car distributor, becoming inspector of transportation in July, 1935. In 1937 he went with the Car Service division of the Association of American Railroads as car service agent at Pittsburgh, Pa., subsequently becoming special assistant to the chairman of the Car Service division at Washington, which position he held at the time of his recent appointment.

R. A. Bell, transportation assistant on the Canadian National, Vancouver Island lines, at Victoria, B. C., has been appointed acting assistant superintendent at Vancouver, B. C.

Sumner Greenwood, general transportation inspector on the Atchison, Topeka & Santa Fe at Topeka, Kan., has been promoted to trainmaster on the Oklahoma division at Arkansas City, Kan., a newly created position.

TRAFFIC

J. W. Grady, commercial agent for the Chicago, Burlington & Quincy, the Colorado & Southern, the Ft. Worth & Denver City and the Wichita Valley at Mobile, Ala., has been promoted to general agent at New Orleans, La., relieving **J. M. McDermott,** who has been transferred to Birmingham, Ala., succeeding **W. T. Vardaman,** deceased.

Herman W. Klein, whose promotion to freight traffic manager of the Northern dis-

Herman W. Klein

trict of the Southern Pacific, with headquarters at Portland, Ore., was reported in the *Railway Age* of June 13, was born at Lathrop, Cal., on September 4, 1889, and entered railway service in 1906 in the general freight department of the St. Louis-San Francisco at St. Louis, Mo. In Janu-

ary, 1910, he went with the Southern Pacific, holding various positions at San Francisco, Cal., including those of chief clerk, assistant general freight agent and general freight agent. On August 1, 1934, Mr. Klein was transferred to Portland as general freight agent, which position he held until his recent promotion.

Carl Howe, vice-president in charge of traffic of the Erie, with headquarters at Cleveland, has been appointed resident vice-president in charge of all departments at Chicago, and has been succeeded by **Harry W. Von Willer,** assistant vice-president at Cleveland.

J. C. Bland, district freight and passenger agent for the Southern at Detroit, Mich., has been promoted to assistant general passenger agent at Memphis, Tenn., succeeding **Arthur M. Crawford,** whose death on May 30 was reported in the *Railway Age* of June 13.

James J. Grogan, general freight traffic manager of the Atchison, Topeka & Santa Fe at Chicago, has been promoted to assistant traffic vice-president with the same headquarters, a newly created position, and has been succeeded by **Tracy L. Bothwell,** freight traffic manager at Chicago.

James J. Grogan

James P. Hackler, assistant general freight agent of the Panhandle & Santa Fe at Amarillo, Texas, succeeds Mr. Bothwell and **Florus R. Ebersole,** chief rate clerk at Topeka, Kan., replaces Mr. Hackler. **Elmer B. Johnson,** freight traffic manager at Galveston, Texas, has been transferred to San Francisco, Calif., to fill the vacancy created by the death of **Albert M. Reinhardt,** and has been succeeded by **Clark Davis,** assistant to the traffic vice-president at Chicago. **Fred H. Rockwell,** assistant general freight agent at San Francisco, succeeds Mr. Davis and **Ralph E. Brandt,** commerce agent, general freight department, succeeds Mr. Rockwell. **Henry C. Vincent,** general freight and passenger agent of the Panhandle & Santa Fe at Amarillo, has been promoted to traffic manager. **C. E. Eaton,** general agent of the Santa Fe at New York, has been promoted to the newly created position of eastern general passenger agent with the same headquarters.

Mr. Grogan was born in Chicago and was first employed by the Santa Fe in 1903 as a stenographer in the Chicago division freight agent's office. He later became city freight agent and chief clerk and while engaged as city freight agent, studied law and was admitted to the bar. During

James P. Hackler

World War I, he was assigned to service with the traffic department of the U. S. Food Administration, being appointed assistant manager of inland traffic for the

Clark Davis

Food Administration in February, 1918. A year later he returned to Chicago and was assigned to service with the Western

Fred H. Rockwell

District Freight Traffic Committee, where he remained until the end of Federal control of the railroads in March, 1920, when he became foreign freight agent of the Santa Fe at Chicago. He was promoted to general freight agent in 1933, to assistant freight traffic manager in 1934, and to freight traffic manager in March, 1938. In April, 1941, he was promoted to general freight traffic manager.

Mr. Bothwell began his railway career in the freight traffic department of the St. Louis Southwestern of Texas in 1904, and was employed by the Southwestern Freight Bureau at St. Louis, Mo., before his first service in 1913 as a rate clerk with the Panhandle & Santa Fe. Subsequently he was employed as a rate clerk and as chief clerk by major Southwestern railroads, and as examiner and chief examiner for the Dallas District Freight Traffic Committee of the U. S. Railroad Administration, during 1919 and 1920. In 1920 Mr. Bothwell went to Galveston, Texas, as chief clerk in the freight traffic department of the G. C. & S. F., and was promoted to assistant general freight agent of that company on May 1, 1923. He was appointed assistant freight traffic manager with headquarters at Chicago in 1937, and was advanced to freight traffic manager in April, 1941.

Mr. Hackler has been in the employ of

Tracy L. Bothwell

the Santa Fe at Amarillo since 1918. He has risen from the position of file clerk to the present appointment.

Mr. Davis entered Santa Fe service in 1907 in the general auditor's office at Topeka, Kan. Subsequently he was appointed traveling freight agent at Hutchinson, Kan., and still later was made division freight agent at Topeka. He was named assistant general freight agent at Topeka in 1931, and was transferred to Chicago as general freight agent in 1938. Appointment to the position of assistant to the traffic vice-president followed in 1939.

Mr. Rockwell entered Santa Fe service in November, 1920, in the freight department, serving in various clerical capacities in that department until 1936 when he was appointed chief clerk to the assistant freight traffic manager at San Francisco. He remained in this position until his appointment as assistant general freight agent.

P. L. Smithburg, chief clerk to the traffic vice-president of the Chicago, Burlington & Quincy at Chicago, has been promoted to assistant to the traffic vice-

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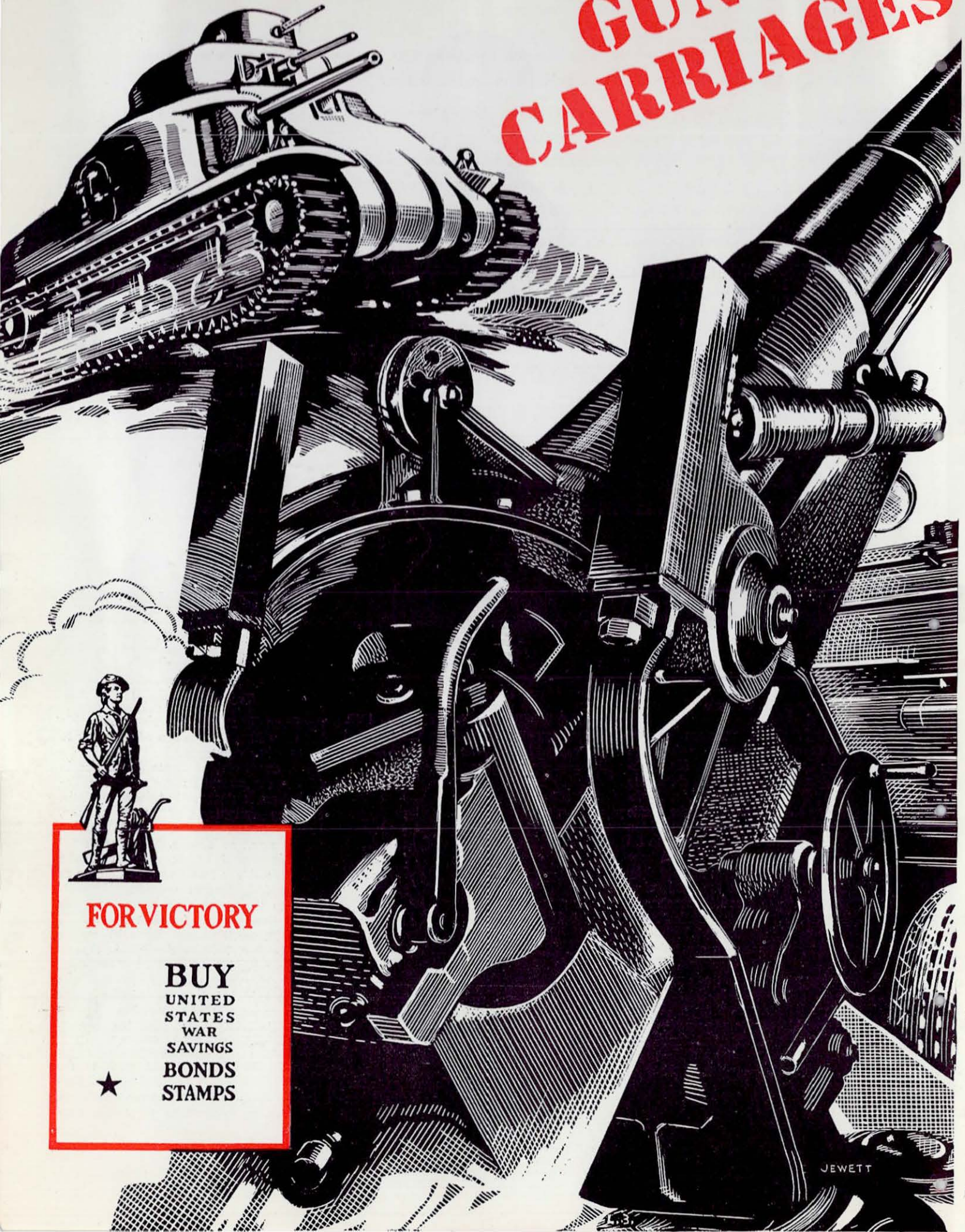
TANKS

GUN CARRIAGES



FOR VICTORY

BUY
UNITED
STATES
WAR
SAVINGS
BONDS
STAMPS

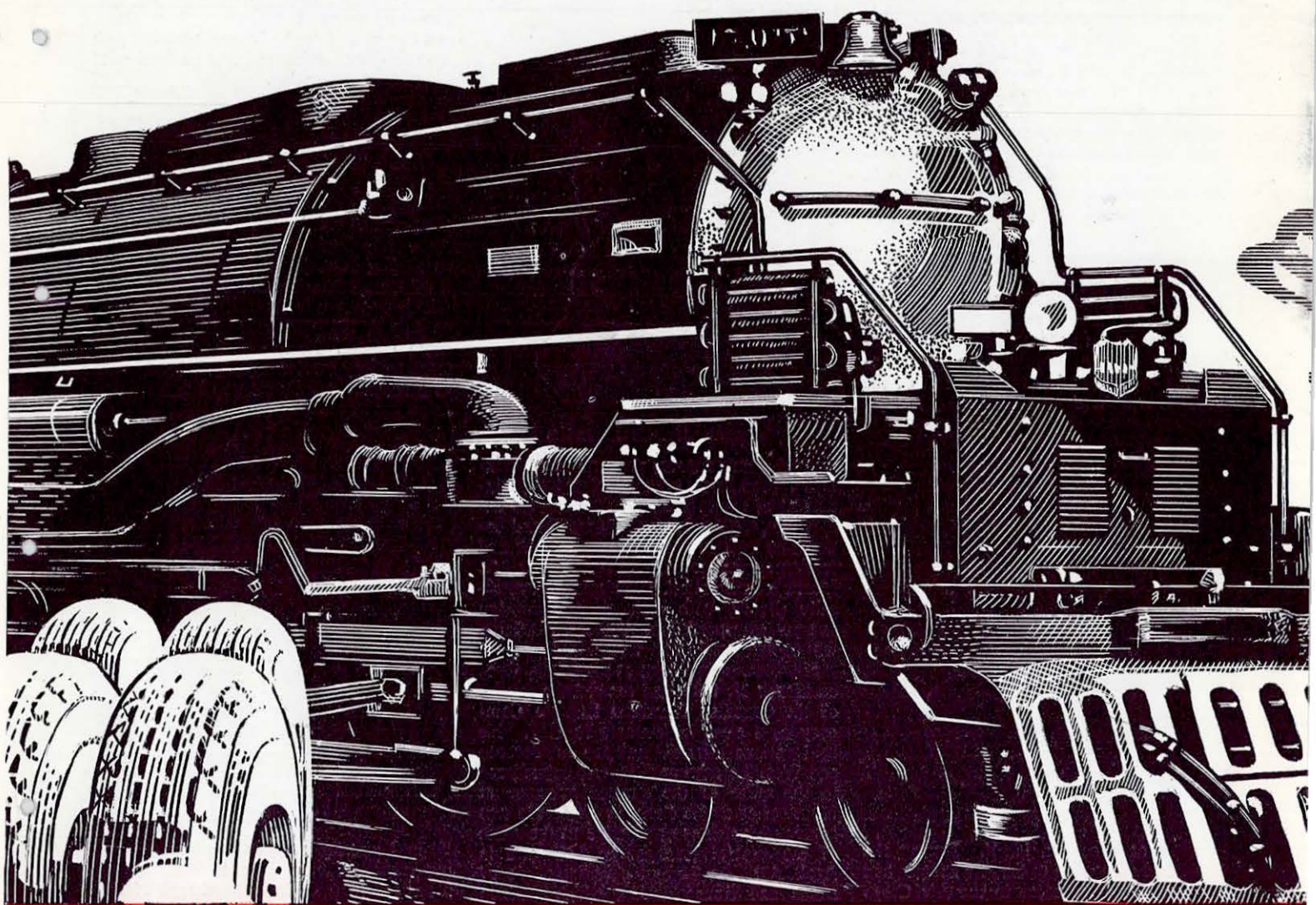
LOCOMOTIVES

It was not a matter of "conversion" when Alco went to work on tanks and gun carriages. Locomotives still must be built. Locomotives are, in fact, one of the most vital items in the entire war effort.

Raw materials must be shipped to manufacturers in all parts of the country. Sub-contractors' products must go to the prime contractors. Finished matériel must be delivered to ports of embarkation. And in many cases, another rail haul carries our tanks, guns, ammunition, food and men to the fighting areas.

Alco locomotives are being delivered in a minimum of time for this vital transportation because 100 years experience has developed a vast wealth of engineering know-how and a wide range of modern locomotive designs with the necessary tools and jigs.

Alco builds tanks, gun carriages and other ordnance, and the locomotives to haul them to the fighting fronts.



AMERICAN LOCOMOTIVE

Manufacturers of Mobile Power

Steam, Diesel and Electric Locomotives, Marine Diesels, Tanks, Gun Carriages and other Ordnance

president with the same headquarters to succeed E. G. Swanson, deceased. After serving as stenographer to master mechanics at Ottumwa, Ia., McCook, Neb., and Galesburg, Ill., Mr. Smithburg came to the general offices in Chicago in 1929. He served as secretary and chief clerk to various officers and became chief clerk to the traffic vice-president in 1937.

Charles E. McCullough, general passenger agent on the Pennsylvania, with

Charles E. McCullough

headquarters at Chicago, has been promoted to assistant to the passenger traffic manager, with the same headquarters, a newly created position, and **E. M. Holt,** assistant general passenger agent at Chicago, has been advanced to general passenger agent, succeeding Mr. McCullough. **M. N. Luthi,** assistant general passenger agent at Chicago, will take over Mr. Holt's duties without change of title.

Mr. McCullough was born at Holden, Mo., on May 25, 1878, and studied law at Georgetown University, Washington, D. C., and was admitted to the bar. He entered railway service in the passenger traffic department of the Pennsylvania at Philadelphia in 1906, and at the outbreak of the first World War was district passenger

E. M. Holt

solicitor at Brooklyn, N. Y. During the war he was a captain in the Air Service and was later made a major in the Air Corps Reserve. Following the war, he served successively as district passenger agent at New York, division passenger agent at Baltimore, Md., division passenger agent at New York, assistant general passenger agent at Washington, D. C., and general passenger agent at Washington. He was transferred to Chicago in 1929.

Mr. Holt was born at St. Louis in 1898, and worked for the Goodyear Tire & Rubber Company before entering railway service in 1914 with the Grand Rapids & Indiana (then a separately-operated subsidiary of the Pennsylvania), at Grand Rapids, Mich. In 1920, he was transferred to the passenger traffic department of the Pennsylvania at Chicago, subsequently being advanced to district passenger agent at that point. He was later division passenger agent at Cleveland, and after further experience in New York and Philadelphia, became assistant general passenger agent at Chicago in 1939.

Russell J. Cleland, district passenger agent for the Western Pacific at Los Angeles, Cal., has been promoted to general agent, passenger department at Oakland, Cal., succeeding **A. H. Moffitt,** who retired on July 1.

Thomas Hilliard Martin, superintendent of traffic and transportation of the Canadian National, with headquarters at Montreal, Que., has been appointed traffic manager and **Clifford William Smith,**

Thomas Hilliard Martin

general agent, express department at Winnipeg, Man., has been appointed superintendent of transportation in the express department. All classification, tariff and solicitation matters pertaining to rail, air and foreign express traffic will come under Mr. Martin's jurisdiction, while matters specifically dealing with rail, air and foreign express transportation, also labor affairs, will be handled by Mr. Smith.

Mr. Martin was born at Hamilton, Ont., on March 27, 1900, and entered the service of the Canadian Northern Express Company as a clerk at Toronto in 1917. He held various clerical positions at Toronto and West Toronto until he was transferred to the office of the general manager at Montreal as traffic clerk, in 1922. He was appointed assistant chief clerk in the office of the general manager in 1929 and in April, 1938, he became superintendent of traffic and transportation, which position he held until his recent promotion.

Mr. Smith was born on June 3, 1896, at Birmingham, England, and entered the service of the Canadian National Express in October, 1912, as a clerk at Brandon, Man. In March, 1914, he was transferred to Calgary, Alta., in a clerical capacity and after a two-year leave of absence for military service he resumed his express duties at Calgary. In November, 1920, he was promoted to agent at Drumheller, Alta., and two years later was made traveling

Clifford William Smith

agent at Edmonton, Alta., afterwards becoming traffic supervisor there. He was appointed agent at Calgary in April, 1937, and two years later he became general agent at Winnipeg, which position he held until his present promotion.

ENGINEERING & SIGNALING

Frank D. Kinnie, regional engineer of the Atchison, Topeka & Santa Fe, with headquarters at Los Angeles, Cal., has been promoted to chief engineer of the Eastern lines, with headquarters at Topeka, Kan., succeeding **Henry W. Wagner,** who retired from active service on July 1. Mr. Kinnie was born in Davidson county, Tenn., on July 8, 1886, and attended David Lipscomb college, Nashville, Tenn. He entered railway service on September 6, 1909, as a rodman on construction for the Santa

Frank D. Kinnie

Fe in Texas, later being appointed a building inspector. On July 1, 1912, he was promoted to transitman in charge of field surveys, later serving as an estimator and pilot engineer on valuation work. On November 3, 1917, he was advanced to assistant division engineer at Winslow, Ariz.,

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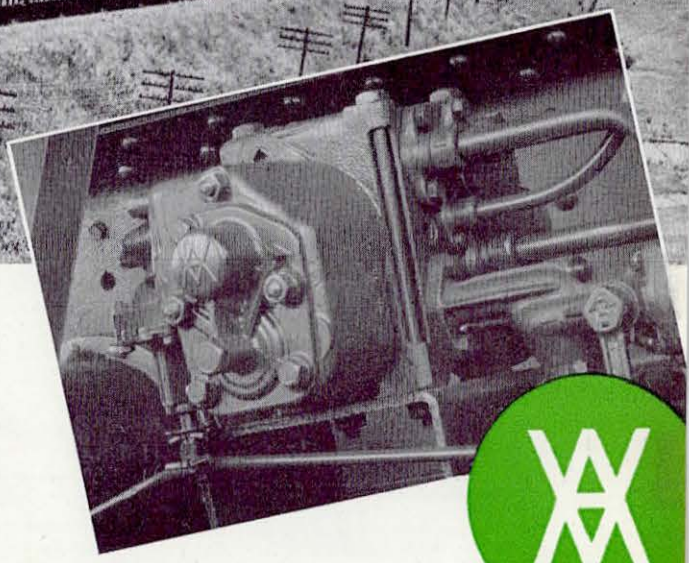
You're Fortunate . . .



IF YOUR CARS have AB Brakes!

NEW freight cars are equipped with AB Brakes, of course, but production schedules of rolling stock have been drastically curtailed • However, many railroads have wisely pursued a vigorous, consistent program of brake conversion, so that entire trains can thus be more effectively controlled. These are they who most fully secure the potential advantages of this modern brake NOW, when the need for smooth, expeditious handling of vital freight is paramount, and when the most service from available traffic facilities is imperative • Moreover, AB braked cars will be a distinct asset in helping to maintain the highest possible operating efficiency during peacetime competition— Remember that AB Brakes adequately safeguard lading, protect cars and make them more serviceable, permit the running of trains at economy-promoting speeds, and contribute to delay-less operation. » » » » » » » » » »

WESTINGHOUSE AIR BRAKE CO.

WILMERDING, PENNSYLVANIA

and on November 21, 1921, he was promoted to assistant engineer in charge of maintenance of the San Francisco Terminal division. Mr. Kinnie was promoted to division engineer of the same division, with headquarters at San Francisco, Cal., on November 1, 1925, and on September 1, 1929, he was advanced to district engineer of the Coast lines, with headquarters at Los Angeles, Cal. In February, 1941, he was appointed regional engineer with the same headquarters, and assigned to special duties in connection with national defense and industrial projects, which position he held until his recent promotion.

Mr. Wagner was born at Boone, Iowa, on June 23, 1872, and graduated in civil engineering from the University of Kansas. He entered railway service in May, 1897, as chainman in the maintenance department of the Santa Fe at Newton, Kan. In May, 1898, he was advanced to rodman and two months later he was promoted to transitman. In April, 1900, he went with the Union Pacific, serving successively as levelman, transitman and location engineer on location and construction work for that

Henry W. Wagner

road and the Oregon Short Line (now part of the Union Pacific). He returned to the Santa Fe in August, 1902, as a masonry inspector, later serving as assistant engineer at Arkansas City, Kan., and Marceline, Mo., and assistant engineer in charge of relocation and grade reduction work at Woodward, Okla. In May, 1909, he was promoted to division engineer on construction at Amarillo, Tex., and in June, 1910, he was advanced to principal assistant engineer, maintenance of way, at that point. Mr. Wagner was promoted to district engineer, with headquarters at La Junta, Colo., in April, 1913, and in October, 1927, he was advanced to chief engineer of the Eastern lines, which position he held until his retirement.

Carroll Benjamin Porter, assistant division engineer of the Chesapeake & Ohio at Huntington, W. Va., has been promoted to division engineer, with the same headquarters, succeeding **R. M. Mumford,** retired. **Gilbert David Mayor,** supervisor of track at St. Albans, W. Va., has been appointed assistant division engineer at Huntington. **Forney Clyde Cunningham,** assistant cost engineer, has been appointed supervisor of track at St. Albans. **Erle Taliaferro Rucker,** assistant engineer, has been appointed assistant cost engineer. **Kenneth Elton Stephenson,** experienced rodman, has been appointed assistant engineer.

J. A. Parkinson, signal engineer of the Western lines of the Atchison, Topeka & Santa Fe, with headquarters at Amarillo,

J. A. Parkinson

Tex., has been promoted to assistant signal engineer, system, with headquarters at Topeka, Kan., a position that has been vacant since May 1, 1934. **H. A. Appleby,** assistant signal engineer of the Eastern lines at Topeka, has been advanced to signal engineer of the Western lines at Amarillo, succeeding Mr. Parkinson. Mr. Parkinson was born at Topeka, Kan., on April 22, 1900, and entered the employ of the Santa Fe as a laborer in the signal department in January, 1919. For three years he was employed in construction gangs, and in 1922 became a draftsman in the Eastern Lines office. Later in the same year he resigned to attend Kansas university. During his college course, he worked intermittently in the office of the signal engineer, system, and

H. A. Appleby

after graduation, he was permanently assigned to work in this office. In May, 1926, he was promoted to chief draftsman in the office of the signal engineer of the system, and in September, 1936, he was promoted to assistant signal engineer, Eastern lines, with headquarters at Topeka. In July, 1940, he was advanced to signal engineer of the Western lines, with headquarters at Amarillo, the position he held until his recent promotion.

Mr. Appleby was born at Cedar Vale, Kan., on February 13, 1897, and graduated in electrical engineering from the University of Kansas in 1923. He entered railway service on February 5, 1923, as an assistant signalman on the Santa Fe at Trinidad, Colo., and on May 1, 1923, he was appointed a draftsman in the office of the signal engineer, Western lines. On August 1, 1924, he was promoted to chief draftsman in the same office and in November, 1930, he was advanced to assistant signal engineer of the Western lines, with headquarters at Amarillo. Mr. Appleby was transferred to the Eastern lines, with headquarters at Topeka, in July, 1940, which position he held until his recent promotion.

MECHANICAL

George S. West, general superintendent of the Central Pennsylvania General division of the Pennsylvania, with headquarters at Williamsport, Pa., has been appointed general superintendent of motive power of the Eastern region at Philadelphia, Pa., succeeding **W. R. Elsey,** whose appointment as assistant to vice-president in

George S. West

charge of real estate, purchases and insurance is noted elsewhere in these columns. **E. C. Gegenheimer,** superintendent of the Philadelphia Terminal division, has been promoted to general superintendent at Williamsport. **J. L. Cranwell,** superintendent of the Indianapolis division, has been transferred to the Philadelphia Terminal division, succeeding Mr. Gegenheimer.

Mr. West was born at Altoona, Pa., on June 23, 1893, and was graduated from Pennsylvania State College in 1917, with the degree of Bachelor of Science in railroad mechanical engineering. He entered the service of the Pennsylvania on June 14, 1909, as a laborer at the Olean (N. Y.) shops, working during the summer months while attending school as machinist helper, blacksmith helper, car repairman, draftsman and machinist. After graduation he became special apprentice, Altoona shops, being furloughed for military service with the 19th Railway Engineers from July, 1917, to October, 1919. On November 1, 1920, he was appointed assistant road foreman of engines at Philadelphia and on February 15, 1923, became assistant master mechanic

News Department continued on next left-hand page

Big Mileage *Parts*

THE wear-resisting properties of HUNT-SPILLER *Air Furnace* GUN IRON are helping many railroads to obtain greater mileage from the vital locomotive parts subjected to constant frictional wear and high superheat temperatures.

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at New York. On November 1, 1923, he was appointed assistant engineer of motive power of the Central Pennsylvania division and on January 16, 1924, he became general foreman of the Cumberland Valley division. On June 11, 1924, Mr. West was appointed assistant master mechanic of the New York division and was promoted to master mechanic on June 1, 1928, which position he held successively on the Conemaugh, Buffalo and Philadelphia Terminal divisions. On January 1, 1931, Mr. West was promoted to superintendent motive power of the Southwestern General division and on November 1, 1931, he became superintendent of the Monongahela division, being transferred to the Erie and Ashtabula division on September 16, 1932; to the Maryland division on July 1, 1933, and to the Pittsburgh division on April 1, 1935. He was promoted to general superintendent of the Southwestern division on February 1, 1937, being transferred to the Central Pennsylvania division on May 1, 1939.

A. E. Calkins, superintendent equipment of the New York Central, Buffalo and East, has been appointed assistant to general superintendent of motive power and rolling stock of the system, with headquarters as before at New York. **G. W. Birk,** superintendent locomotive shops of the Cleveland, Cincinnati, Chicago & St. Louis, with headquarters at Beech Grove, Ind., has been appointed assistant to general superintendent of motive power of the New York Central system at New York. **T. J. Lyon** succeeds Mr. Birk at Beech Grove. **A. D. Bingman,** superintendent of equipment of the lines West of Buffalo and the Ohio Central lines, with headquarters at Cleveland, Ohio, has been transferred to New York, with jurisdiction over the Equipment department, lines Buffalo and east and the Boston & Albany railroad. **W. N. Messimer,** general car inspector of the system, has been appointed assistant superintendent of equipment, with headquarters as before at New York. **C. N. Kittle** has been appointed division general car foreman, with headquarters at Buffalo, N. Y., succeeding **R. L. Chandler,** who retired on June 30 after 47 years of service.

Ira G. Pool, master mechanic on the Great Northern at Spokane, Wash., has been promoted to general superintendent of motive power and equipment, with headquarters at St. Paul, Minn., succeeding **Henry Yoerg,** who retired on July 1. **A. B. Colville,** superintendent of motive power at Spokane, has been appointed superintendent of motive power, with system jurisdiction, particularly over steam locomotives, with the same headquarters. **J. L. Robson,** master mechanic at Grand Forks, N. D., has been advanced to superintendent of motive power, with headquarters at St. Paul, Minn., and with system jurisdiction, particularly over Diesel-electric, electric and gas-electric locomotives.

Mr. Pool was born in Minneapolis, Minn., in 1891, and entered the service of the Great Northern in 1920 as a locomotive designer. In 1925 he became a fuel supervisor for the Mesabi district. A year later he was transferred to Great Falls, Mont., as fuel supervisor for the Montana district, and in 1929 became assistant master mechanic of the Montana division with headquarters in Havre, Mont. Later in the same year he was transferred to Whitefish, Mont., and in 1931 went to Klamath Falls, Ore., as master mechanic of the Klamath division. After subsequent assignments, he was transferred to Grand Forks, N. D., as master mechanic of the Dakota Division, and in 1941 was transferred to Spokane.

Mr. Yoerg was born at St. Paul in 1871 and graduated from Massachusetts Institute of Technology. He entered railway service in 1897 as a draftsman on the Great Northern and his first assignment was followed by several years of engineering duties along the system. In 1902 Mr. Yoerg

Ira G. Pool

was promoted to superintendent of shops in Havre, Mont., and the following year he returned to St. Paul as superintendent of the locomotive and car shops there. In 1908 he was appointed mechanical engineer and in 1917 he was promoted to assistant superintendent of motive power. Three years later he became superintendent of motive power and in 1935 was appointed general superintendent of motive power and equipment.

T. Harrison has been appointed works manager of the Ogden shops of the Canadian Pacific at Calgary, Alta., succeeding **J. P. Kelly,** whose appointment as master mechanic of the British Columbia district, with headquarters at Vancouver, B. C., was reported in the *Railway Age* of June 27.

PURCHASES AND STORES

J. S. Fair, Jr., acting purchasing agent of the Pennsylvania, with headquarters at Philadelphia, Pa., has been promoted to purchasing agent.

A. W. Hix, acting general purchasing agent of the Chesapeake & Ohio, the New York, Chicago & St. Louis and the Pere Marquette, has been promoted to general purchasing agent of these roads, to succeed **R. M. Nelson,** who has retired at his own request.

SPECIAL

H. D. Brydone-Jack has been appointed acting manager, Department of Personnel, of the Canadian Pacific, with headquarters at Montreal, Que., succeeding **George Hodge,** whose services have been made available to the government.

C. H. Kilburn, advertising manager for the New York Central system at Chicago, retired on July 1 after more than 50 years' continuous service. Mr. Kilburn entered railway service in 1892 as a ticket stock clerk with the Michigan Central in Chicago. He was made advertising clerk on May 15, 1904, and was promoted to advertising manager on September 5, 1922.

OBITUARY

Renwick G. Common, assistant general land and tax agent of the New York Central system, died of a heart attack on June 28 at his home in Yonkers, N. Y., at the age of 65.

William Reed Davis, master mechanic of the Philadelphia division of the Pennsylvania, with headquarters at Harrisburg, Pa., died of a heart attack at the Enola yards on June 24, at the age of 49.

James R. Van Delinder, general freight agent on the Chicago, Indianapolis & Louisville (Monon), with headquarters at Chicago, died on June 27 at his home in Wheaton, Ill. Mr. Van Delinder was born at Oxford Junction, Iowa, and entered railway service in 1895 with the Chicago & North Western. In 1915 he went with the Monon, being promoted through various positions to assistant general freight agent at Chicago. On June 15, 1929, Mr. Van Delinder was advanced to general freight agent, which position he held until his retirement.

William L. Bean, former mechanical manager of the New York, New Haven & Hartford, died of a heart ailment at Santa Monica, Cal., on June 26. Mr. Bean was born on January 3, 1878, and graduated in mechanical engineering from the University of Minnesota in 1902. He immediately entered the service of the Northern Pacific as a special apprentice, and on January 1, 1905, he became a gang foreman for the Atchison, Topeka & Santa Fe. The following year he was promoted to inspector and in 1908 to machine shop foreman. In 1909 he became division foreman, and a few months later, motive power assistant. In 1911, he was appointed bonus supervisor and held that position until early in 1912. He then entered the service of the Oxweld Railroad Service Company as chief engineer, remaining with that company until 1916. Mr. Bean went with the New Haven in July, 1916, and in September, 1917, was made assistant general mechanical superintendent, and on November 1, 1918, mechanical assistant to the president, acting in that capacity until December 1, 1923, at which time he was made assistant mechanical manager. In June, 1925, Mr. Bean was promoted to mechanical manager, with headquarters at New Haven, Conn., in which capacity he served until the latter part of 1929. He was for a time the western representative of the Leslie Company and then in September, 1933, was appointed mechanical assistant to V. V. Boatner, western regional manager on the staff of the federal co-ordinator of transportation. Mr. Bean was president of the New England Railroad Club, 1925-26.

Valuable Books for Your Library

Mastering Momentum

By LEWIS K. SILLCOX

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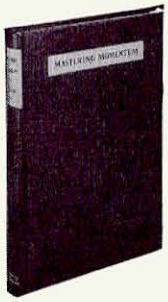

The author explains the features of high speed operation which have been responsible for such innovations in braking as electro-pneumatic combinations, automatic rail sanding, retardation control, and wheel slide detectors in passenger service; and delayed emergency, rapid quick service propagation and positive release of freight car brakes. The influence of heavy, sustained braking upon wheel and car truck design is discussed, together with an explanation of the responsibility of high braking temperatures upon the shelling and thermal cracking of steel wheels. Spring suspension systems, dynamic effects upon riding qualities, track stresses, and weight transfer tendencies are analyzed. Draft gear design and its relation to shock absorption and the running stability of freight and passenger cars are investigated.

1941. 275 pages, 130 illus., 6 x 9, cloth, $2.50

Railroad Electrification and the Electric Locomotive

By ARTHUR J. MANSON

Manager, Transportation Sales Department, Westinghouse Electric & Manufacturing Company

Written primarily for railway officials and operating men who desire a general knowledge of the design, construction, and operation of electric locomotives and of their application to different kinds of railroad service. Typical problems encountered in electrification of steam railroads are outlined, together with their solutions. Fundamental principles are stressed, and the book is illustrated with photographs, detail drawings, diagrams and charts.

1925. 2nd, 332 pages, 146 illus., 6 x 9 inches, cloth, $3.00

United States Regulations

For Steam and Other Than Steam Locomotives

Laws, rules and instructions for inspection and testing of steam locomotives and tenders, and other than steam locomotives, with interpretations, rulings and explanations on questions raised relative thereto, as prescribed by the Bureau of Locomotive Inspection. Includes safety appliance standards for locomotives as fixed by order of the I. C. C.

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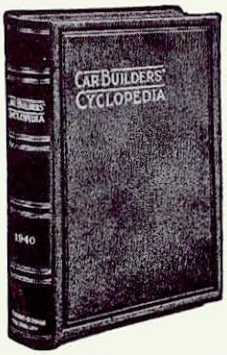
Editor of Railway Mechanical Engineer



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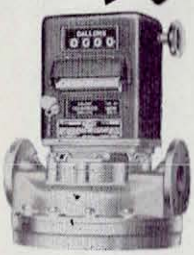

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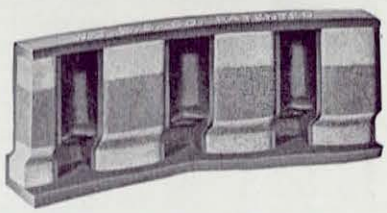

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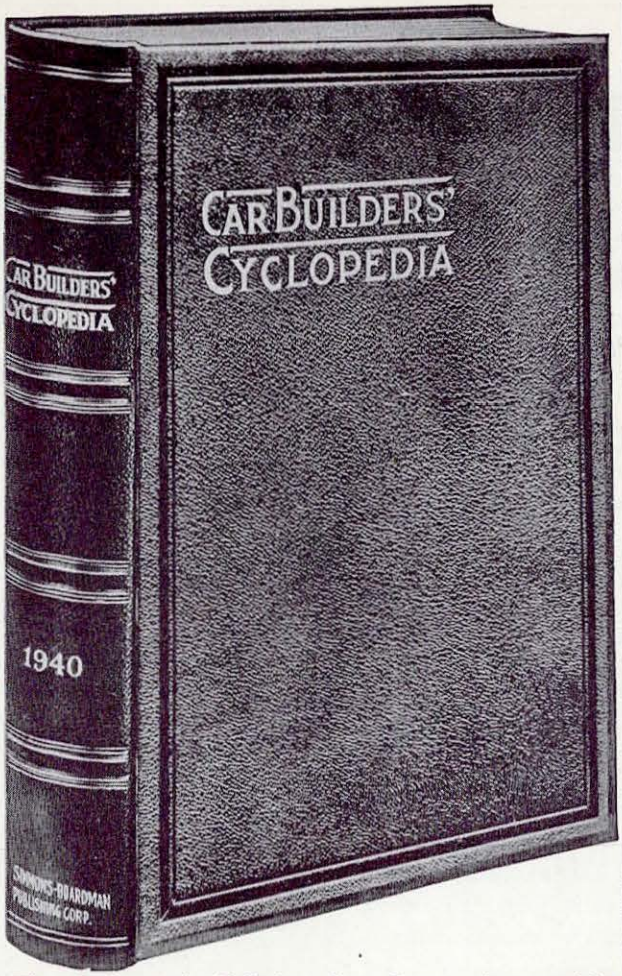

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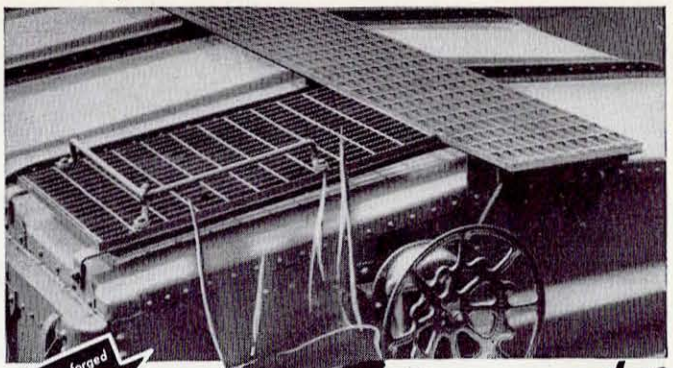

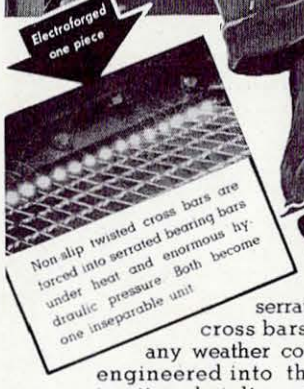
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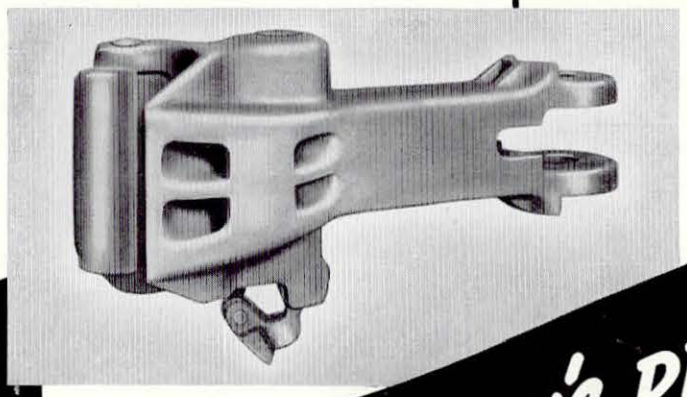
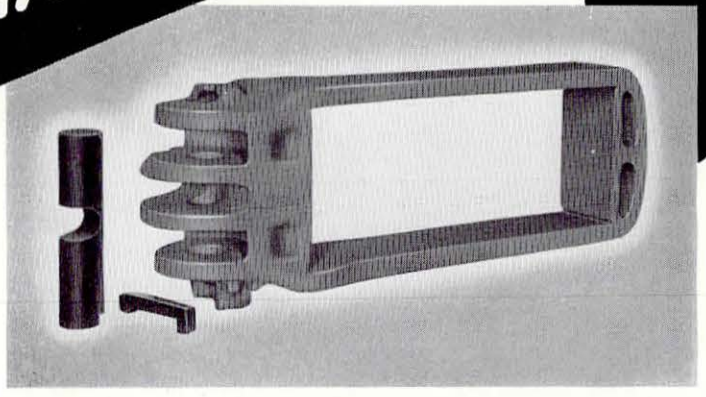
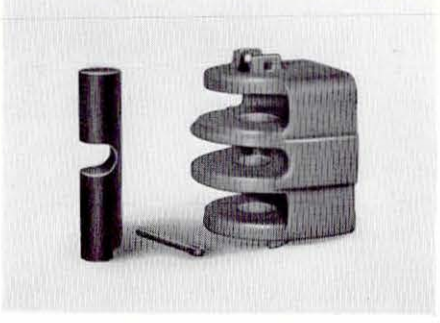
MEETING TODAY'S REQUIREMENTS







...With Alternate Standard Swivel Shank
For Vertical Cast Steel Swivel Yoke

...With Swivel Butt for
Horizontal Yoke Attachments

• Under BUFF and PULL, bearing areas between Coupler and Yoke are uniform for all angling positions of the Coupler . . . reducing wear of Coupler, Yoke and Keys.

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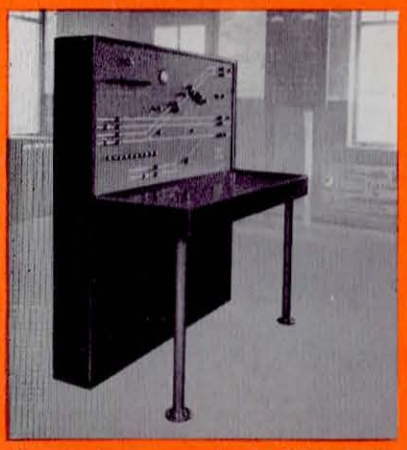
INTERLOCKINGS ARE CHANGING!

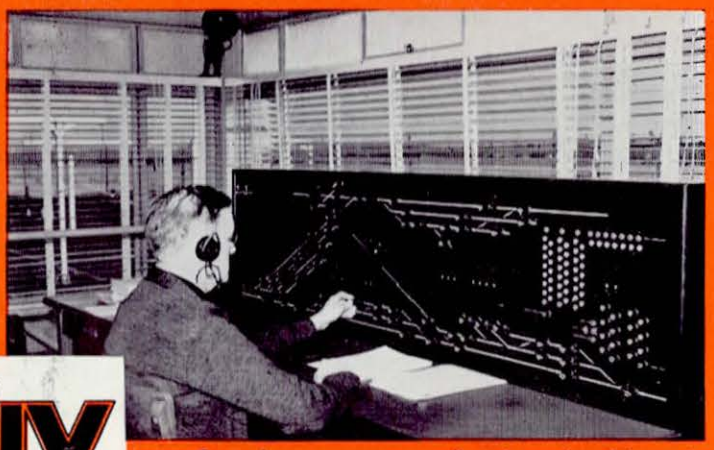
The **NX (eNtrance-eXit) System of Electric Interlocking** has introduced new ideas which progressive managements are using to speed up train movements and to reduce operating costs in terminals.

A new style of interlocking station with a modern control room and a greatly simplified control machine has appeared. The trend is clearly towards the simpler method of control by the NX system.

Since 1937, when NX was introduced in the U.S.A. by this company, this trend has been marked by the following signs:



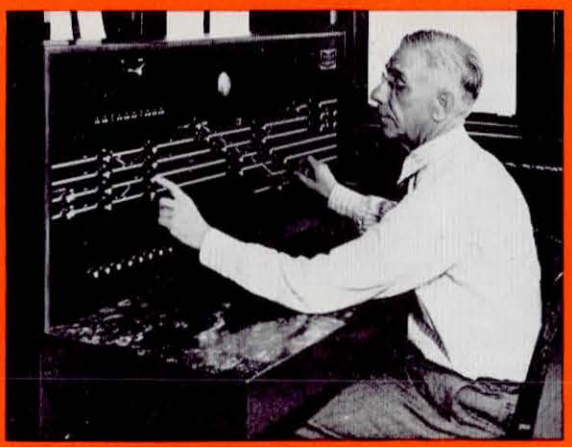
Large, heavy, mechanical interlocking machines are replaced by light, compact control machines requiring approximately 1/10 the floor area.



Control rooms are small, airy, cheerful, and modern. Distracting, unrelated elements such as wall charts, diagrams, and track indicators are abolished. All operating information is concentrated on the NX control panel.

The **NX** **SYSTEM** of ELECTRIC INTERLOCKING

New interlocking stations have a small second story for the control room; less building materials are required. First floor houses relays, batteries, and sometimes the heating plant and maintainer's quarters.



Efficiency of manipulation is the prime consideration. It reduces chances of error in routing trains. Operators have more time for their essential duties.

With NX the lining up of any route is a straightforward, logical manipulation White lines on the panel represent the track layout. At the ENTRANCE of every route is an ENTRANCE KNOB; at the EXIT, an EXIT BUTTON To line up a route, simply press the entrance knob corresponding to the point where the train is to enter the interlocking, and press the exit button where the train is to leave.

NX does the rest—positions switches, clears signals, and indicates the movement of the train—without further action by the operator

Let our nearest office give you complete information on NX.

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A-1575